

DOCUMENT RESUME

ED 153 020

08

CE 015 641

AUTHOR Benson, Arland; Henriksen, Dorothy, Ed.
TITLE Evaluation. Career Education Dissemination Project. Implementation Booklet #3.
INSTITUTION Roseville Area School District 623, Minn.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE 77
NOTE 86p.; Five pages of evaluation plan charts may not reproduce well; For related documents see CE 015 637-643

EDRS PRICE MF-\$0.83 HC-\$4.67 Plus Postage.
DESCRIPTORS Administrator Guides; Behavioral Objectives; *Career Education; *Curriculum Evaluation; Data Collection; Educational Assessment; Elementary Secondary Education; *Evaluation Methods; Formative Evaluation; Inservice Teacher Education; Measurement Instruments; Needs Assessment; Program Development; *Program Evaluation; Resource Materials; School Districts; Summative Evaluation

IDENTIFIERS Minnesota (Roseville)

ABSTRACT

Materials contained in this career education implementation guide (one in a series of seven) provide concrete examples of how to evaluate a comprehensive career education program using the approach of applying logic and objectivity to the process of judging the merits of career education activities. Major topics discussed include the following: evaluation and a balanced program; unique considerations in career education evaluation; measurable realistic objectives; needs assessment; instruments, content-, criterion-, domain-referenced instruments; applied performance measures; evaluation design; longitudinal design; example evaluation design; data collection; unintended effects; cost effectiveness; and reporting results. A resource section listing comprehensive guide books to educational evaluation is provided. Appendixes contain tests to be administered to teachers following use of the booklet in inservice programs. (TA)

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ROSEVILLE AREA SCHOOLS

Independent School District #623

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Roseville, Minnesota 55113

CAREER EDUCATION DISSEMINATION PROJECT
IMPLEMENTATION BOOKLET #3

EVALUATION

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OVERVIEW

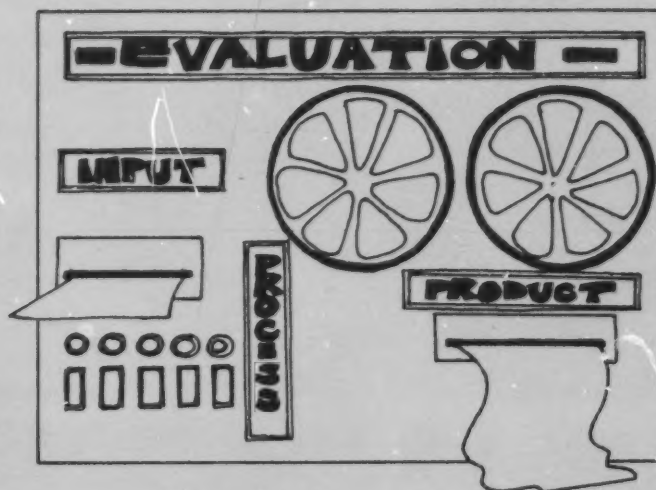
The purpose of this booklet is to provide concrete examples of how to evaluate a comprehensive career education program. The examples are drawn from several years' work in career education. The intent is not to duplicate the comprehensive guide books to educational evaluation that have become available in the past four years and which are referenced in the section on resources.

The approach to evaluation presented is one of applying logic and objectivity to the process of judging the merits of career education activities. Strictly speaking, evaluation is the process of explicitly determining criteria and systematically gathering data to make a judgment of quality or worth. In a larger sense, evaluation becomes an integral part of program planning including establishing goals, assessing needs and improving programs. The evaluation design represents a systematic framework for gathering data and making judgment about the important questions that decision makers must ask. The early identification of the decisions to be made, the types of meaningful data to be collected, and the methods of communicating such data to the various decision making groups, are the critical issues. Value judgments must be made explicit and are crucial to the evaluation process. Measurement as represented by psychometrics and statistics should never replace knowledge of the content and processes of career education as primary in evaluation. The context of the program activities needs to be presented in order to interpret both the process (formative) results and the product or outcome (summative) results of evaluation.

The major components of an evaluation program are as follows:

Context - The school-community setting in which the career education activities take place, includes available human and material resources, past activities and outcomes, commitments and attitudes.

Input - The specific objectives, programs, activities, and sequencing; includes procedures, materials, equipment, personnel and target groups.



Input is the treatment factor and it should include the strength, duration, intensity, and cost of specific programs. For example, the number of student lessons or hours of staff in-service are important treatment designators along with the cost in terms of staff time and expertise, materials, equipment, etc. Inputs are often vaguely described in career education programs.

Process - The actual processes and activities used to deliver the treatment(s) to the target group(s) need to be described and evaluated in terms of participant reactions and suggestions, other measures of effectiveness. Participant reaction questionnaires, process observation and participant interviews are common techniques. Process evaluation is really an integral part of good management procedures and needs to be a part of any program. Measurable process objectives are crucial.

Product - The measuring and judging of the quality and worth of the inputs and process used. Putting the evaluation design into questions such as "Did the curriculum unit as taught, achieve the student learning objectives specified?" is a practical way to evaluate product or treatment outcomes. Product refers to teaching strategies as well as curriculum packages. Measurable learner objectives are crucial.

It is difficult in education to specify objectives that are cut and dried and can be answered yes or no. It is also necessary to look for any unintended side effects of career education programs. Side effects can be desirable or undesirable but in either case they must be looked for.

The cost effectiveness of career education activities in both the short and long range must also be determined if the evaluation results are to impact decision makers.

EVALUATION AND A BALANCED PROGRAM

Each evaluation component, context, input, process and product, needs to receive a balanced amount of attention. If one component is ignored or slighted, the entire design, reporting, and decision influencing process is weakened. Balancing each component means trying to equalize the quality of each, not necessarily committing equal time and effort to each.

Also the concept of balanced quality is important in looking at each segment of the total planning-implementing process including: determining goals, assessing needs, establishing priorities, planning and implementing programs, evaluating, and revising, based upon evaluation results. Each of these segments, from determining goals to revising programs should receive some attention. In the long range, a career education program will be as effective as its weakest planning and implementation segment. Often program segments such as evaluation are ignored altogether. The reverse situation of over emphasizing a program phase such as needs assessment or evaluation is also counter-productive.

UNIQUE CONSIDERATIONS IN CAREER EDUCATION EVALUATION

Career education as a general thrust or refocusing movement in education represents unique evaluation challenges. Starting with the analysis of context, the broad scope of career education requires inclusion of much of the

larger community beyond the school as well as all departments and subgroups within the school.

Input description often includes a broad range of staff, student and community activities which are often delivered in less than systematic fashion to random individuals or subgroups within the target populations. One example is a career education program which is initiated by a staff in-service program and the procurement of curriculum materials. Student learning from such inputs is very difficult to determine without knowing how much systematic instruction was initiated after the in-service. Assuming that all teachers will systematically teach specific objectives after a career education in-service is unrealistic.

Another complication is the large number of goals and objectives associated with career education. Usually self appraisal, decision making and career exploration are career education goals. Interpersonal skills, school and work philosophy, economic awareness, and basic academic skills are also frequent career education goals. It is not uncommon to find eight to fifteen general goals and fifty to one hundred performance objectives in a career education model. Returning to the teacher in-service and materials input example, it becomes difficult to know which goals and activities specific teachers and specific students or groups of students worked with. Even receiving a description of student activities does not necessarily identify the instructional goals intended. Some students may receive numerous instructional efforts in career exploration and none in decision making. If the nature of the treatment and objectives can be specified, then an evaluation design can be devised that will affect the various broad goals and differential treatments students receive. Since career education models include every teacher (plus other adults influencing students) and every student, the tendency is to sample large populations with general instruments. The probability of losing sight of any specific success or failure becomes high with a "shot gun approach." Some students may exhibit growth in one or more goal areas only to have it cancelled out by students who have received systematic instruction.

The evaluation strategies in this booklet will reflect the efforts of the Roseville Area Schools to specify career education treatments and populations so that qualitative judgments can be made.

Process evaluation can help specify exactly what treatment was applied to which people. Product evaluation is the culmination of context, input and process analysis and is only as effective as these three elements.

Cost effectiveness is an integral part of product evaluation. Career education cost effectiveness is particularly difficult because of the difficulty of putting a value upon specific learning outcomes. If a farmer puts x amount of fertilizer, time, and equipment depreciation into an acre of wheat, the outcome is measured in bushels. Putting a value on five or ten more points on a career education test is not so easy. Comparing various treatments based upon common learning treatments is one way to approach the problem. Cost effectiveness has to be addressed in any evaluation design.

The final phase of evaluation is the reporting of results, conclusions and recommendations in ways that will influence the decision makers; i.e.,

school boards, administrators, community agencies and other governmental bodies.

In summary, career education as a concept needs to be broken down into specific programs for specific populations in order to be evaluated by a school district. The technology of human services evaluation in general, and career education in particular, is in its infancy; however, the task is not impossible. Lack of confidence is a major barrier. The activities presented here are the result of a school district using its own "relative experts" to evaluate with minimal outside help. The knowledge of career education content and process combined with logic and planning have been used more than expertise in statistics and research design. Some psychometrics is needed, but the heart of career education is knowledge of the field. Objectivity, however, will be questioned unless external judges and norm referenced instruments are used for a part of the evaluation program.

MEASURABLE REALISTIC OBJECTIVES

Career education is being implemented as a new program and/or as revisions of programs at a time when accountability and management by objectives is impacting education. New programs have to demonstrate results and cost effectiveness. At the same time career education emphasizes a personalized approach to the student-teacher relationship and a participatory decision making structure in the school.

Career education objectives, therefore, need to be measurable and also conducive to reflecting attitudes and contributing to staff worker satisfaction.

Student learner objectives need to include self concept and interpersonal skills as well as knowledge of career planning and exploration. Staff learner objectives must cover the same areas as student learner objectives. (See Implementation Booklet #4 - Staff Development.)

Learner Product Objectives

Examples of student learner objectives are described in Implementation Booklet #2 - Curriculum Development. A three level scale of specificity is suggested for student learning objectives. For an example in decision making at the secondary level, the following might be used:

- Goal B. To apply decision-making skills to personal life planning.
 - 1. Analyzes tentative lifestyle plans with a decision-making model.
 - a. The student describes aspirations, alternative courses of action and the field forces affecting goal attainment.
 - b. The student formulates sequential short and long-range tentative plans with identification of decision strategies used.
 - 2. Realistically predicts the probable consequences of tentative personal plans.
 - a. The student describes the outcomes of tentative career decisions in terms of personal goals and effects upon significant others.
 - b. The student can describe the odds of success and failure of personal plans from a personal viewpoint.

- c. The student modifies tentative personal plans in the light of new information and chance factors.

Decision-making skills is the general goal area. Analyzing plans with a decision-making model as a more specific performance objective and describing aspirations, alternatives and field focus is closer to a measurable objective. A fourth level of specificity can be added in which one or more behavioral, instructional objectives are written for aspirations, alternatives and field forces; however, such specificity is sometimes premature and perhaps unnecessary.

The trend from global goals to detailed behavioral objectives of the past four years may be unrealistic at times. For example, unless one is experienced in the area of teaching decision-making it may be presumptuous to specify large lists of behavioral objectives. The trend to precise behavioral objectives can also result in overemphasizing the mundane and the unimportant. For example it is much easier to specify that students will be able to list thirty occupations in twenty minutes with less than nine spelling errors than to specify how a student will critically use advice in career planning. The development of middle range precision learning objectives is suggested with the addition of more behavioral type objectives by teachers as they develop and field test curriculum lessons and develop their expertise in instructional strategies.

Other related issues are the provisions for various teaching and learning styles, some of which result in significant side effects to the planned objectives as well as on-going negotiation of goals between teacher and student, based upon interests and needs.

An assumption permeating the Roseville evaluation model is that only extensive instructional efforts, as reflected by knowledgeable teachers working over an extended time with a specific group of students, will show any reliably measureable results!

The difficulty of many career education programs is in trying to demonstrate measurable results which are probably due to a combination of thinly dispersed treatments and overly pretentious objectives. (See literature review by Arterbury, Collie, Jones and Marrell (1975) and Bhaerman (1977).)

An example set of staff learner objectives in the area of evaluation is as follows:

Staff Learner Objectives: Evaluation Skills, Roseville Communication Project 1977-78.

To develop the necessary skills for evaluating student career development competencies for the purpose of program improvement.

1. To be able to write measurable student learning objectives for career development goals.

2. To be able to specify criteria standards for judging career development competencies.
3. To be able to identify at least three methods for measuring student performance.
4. To be able to develop an evaluation design with process and objectives for an actual or simulation career education program.
5. To be able to report evaluation results in ways that can influence implementation policy.

As evidenced by:

- ...A measurable set of at least 60 student learning objectives in at least five goal areas, as documented by the external evaluator.
- ...A written list of criteria standards for judging the attainment of the student learning objectives.
- ...An acceptable rating as to reliability of a simulation or actual evaluation report as judged by an external evaluator.
- ...An increase in scores on a knowledge test of evaluation techniques evaluating design administered at the beginning and at the end of the communication project.

Additional examples of staff learner objectives are found in Implementation Booklet #4 - Staff Development.

Process Objectives

Process objectives are usually program implementation objectives and must be developed in ways that contribute to staff morale. The use of advisory committees, task forces and decentralized decision making in objectives and development facilitates staff morale.

Process (program) objectives covering the planning, implementing, evaluating, and revising of the career education program may take a different format from that of the staff and student learner objectives. Specifying who will do what, when, and with what degree of intensity is part of planning and management as well as evaluation. Some way of documenting program objectives is necessary not only for accountability but also for program staff morale and job satisfaction. Self-reinforcement resulting from knowledge of positive results is more probable if one specifies objectives and then prioritizes implementation efforts and evaluates outcomes based on measurable objectives.

With program objectives as with learner objectives, there is a danger of being too general and/or too pretentious or being too detailed. The pressure for detailed, easily measurable process objectives can lead to a rapidity of implementation as well as over emphasis in the readily accountable.

The following evaluation design questions reflect the process objectives for the Roseville Career Education Program for the 1975-76 school year:

Evaluation Design

The evaluation design was developed after extensive discussions with the evaluation consultant. It was agreed that the activities included in the evaluation design were to meet the evaluation needs of the project. It also was agreed that the evaluation design would be flexible as new information needs were identified.

Using the outcome and process objectives in the first-year (1975-76) project proposal as the primary source of evaluation needs, a set of evaluation questions were identified. For each evaluation question, the instruments and techniques that were used to provide data to answer the question have been identified.

Community and Staff Input

1. Did the advisory committee serve a useful purpose?
 - a. Minutes of advisory committee meetings including dates, content, evidence of advisory committee input.
 - b. Questionnaire to advisory committee members regarding perceptions of meetings and project staff in relation to value of committee and involvement in decision making. Given at end of third meeting and near end of year.
2. Did the building steering committees serve a useful purpose?
 - a. Records of major committee activities and actions; needs assessment, evaluation, developing building policy.
3. How do staff participants view the project?
 - a. Staff participants on steering committees, curriculum development, and instruction will complete questionnaires regarding opportunities for input, organization-administration of the project, and value of project activities in which they participated.

Staff Development

4. How many school staff members participated in at least one of the staff development options?
 - a. Record kept by project staff indicating school staff participation in the following options: short-course, two-credit general course, two-credit sub-options, school-community visitations-exchanges, and internships.
5. How many community members participated in at least one of the staff development options?
 - a. Record kept by project staff similar to 4.a.

6. What were the staff development participants' reactions to the staff development options?
 - a. Questionnaire immediately after participation in option to measure strengths and weaknesses of the staff development activities.
7. Did the participants in the staff development options develop more positive attitudes toward career education?
 - a. Locally-developed questionnaire administered prior to participation in staff development options, immediately after participation, and, if sufficient time has elapsed, at the end of the school year. The questionnaire also will be given to teachers who use the career education mini-units. The questionnaire will include items measuring the respondents' feelings about the value of career education and their willingness to become involved in career education.
 - b. A record will be kept that indicates the participants' involvement in career education activities from the end of the staff development until the end of the school year.
8. Did the participants in staff development options develop a greater awareness of career education definitions, issues, models, programs, and materials?
 - a. Knowledge test administered before and after participation in staff development options that have greater awareness of career education definitions, issues, models, programs, and materials as their objectives; for example, the two-credit general course.
9. Did participants in staff development options develop greater awareness of expectations and greater communication and trust between school and community groups?
 - a. Pre-post questionnaire to participants in staff development options that included school-community communication as an objective.
10. Did participants in staff development options develop teaching and advising skills in the five areas of student outcome objectives, and in shared decision skills in groups and organizations?
 - a. Evaluation undetermined at this time until options and activities are identified that will address these objectives. If activities are conducted, evaluation will include an assessment of skills in the identified areas by both staff and students.

Curriculum Development

11. Did the amount of curriculum development meet the goal set at the beginning of the year regarding number of departments, composition of department teams, number of mini-units for each student outcome area, and grade level participation?
 - a. Record of curriculum development kept in project office.

12. Were criteria for the development of curriculum mini-units established?
 - a. Set of criteria in project office.
13. Did the developed mini-units meet the established criteria?
 - a. Rating of mini-units by project director and evaluator.
14. Were the mini-units field tested by at least two teachers?
 - a. Record of field testing.
15. What were the students' reactions to the content of and method by which the mini-units were presented?
 - a. Student questionnaire at the end of each unit.

Student-Centered Career Maturity Measurement

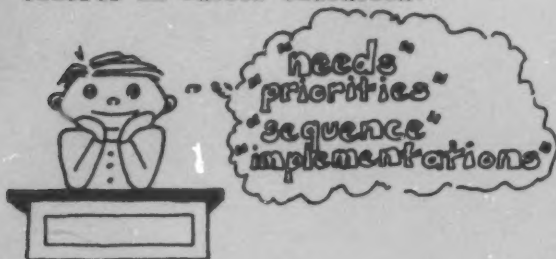
16. Was a process developed that provides for student-centered measurement of career maturity?
 - a. Statement of the components of the process; e.g. necessary criteria, optional activities, etc.
17. To what extent was the student-centered process put into action during the 1975-76 school year?
 - a. Record of participation at identified sites; e.g. Parkview advisors, Kellogg elective course.
18. What are the participants reactions to the student-centered career maturity measurement process?
 - a. Questionnaire and interviews with participating staff and students.

Resource Centers

19. What activities took place in the three career resource centers?
 - a. Resource aide will keep a daily log of activities using the following categories: student and staff use of resource center; resource aide contacts with students, staff, and community; community use of resource center.
20. How do students and staff perceive the value of the career-resource center services?
 - a. End-of-the-year questionnaires and interviews with a sample of students and staff who used the resource center.
 - b. Interviews with career resource aides.

NEEDS ASSESSMENT

Conducting a needs assessment early in the planning and implementing sequence has several advantages. A needs study helps establish program priorities and an implementation sequence as well as credibility for future efforts in career education.



Needs assessments vary from casual surveys of selected populations to comprehensive efforts to measure actual performance and compare with explicit standards. Needs assessment can logically be included in planning and management strategies or in evaluation strategies.

The four phases of a needs assessment program are as follows:

Phase I - Establishing the general learner goals for career education.

Phase II - Developing the specific learner objectives for career education.

Phase III - Measuring learner performance and determining needs.

Phase IV - Establishing program priorities based on needs.

Establishing the general learner goals may be the first opportunity for professional and lay collaboration in implementing career education. A needs assessment committee, representing a slice of the school staff, students, parents, and community interests, is an effective way to start. The needs assessment committee can be formed to advise only on the needs study or it can become the general advisory committee. For more specific information on advisory committees see Implementation Booklets #7 - Planning and Management and Booklet #1 - Consultation and Shared Decision Making. The professional career education staff will need to provide the committee with a scope and sequence model of career education learner goals. (See Implementation Booklet #3 - Curriculum Development for an example.) The committee may wish to modify an existing scope and sequence model. Priority rankings of general goals may be requested of student, staff, parent, and community groups including business, labor, and community agencies.

Needs assessment, as with all segments of planning, implementing and evaluating, should not get bogged down in a time consuming process out of balance with other activities; needs assessment is an on-going process and should be conducted periodically using only a few weeks' time.

After the general learner goals have been established for students, measurable objectives will need to be developed supporting each goal judged important. There are several sets of learner objectives readily available that can easily be adapted to reflect local sentiments. Staff learner goals and objectives may also be included in the needs study, or may be followed up after the student needs have been determined. The latter is usually a more credible procedure, especially with lay groups.

In measuring learner performance, the measurement instruments are the same as the evaluation instruments which are used again later to measure program outcomes. The major barrier to a measured needs study has been the lack of adequate performance measures. In most instances needs studies have focused on expressed needs through surveys of students ("I think I need . . .") and surveys of adults ("I think our students need . . ."). Expressed needs studies are useful but do not measure actual student performance.

Expressed needs studies must be interpreted conscientiously, as to the accuracy of results. If the populations sampled trust the process and have confidence in the follow-up, honest reactions will result. A target population's self appraisal of needs, however, will not always be in agreement with a professional appraisal. For example, students may say they need a career plan but may not perceive the need to study how to make decisions wisely. If measured needs can be established, the follow-up programming and product evaluation will be expedited.

In the final phase of the needs study, the discrepancies between stated goals and actual student learner performance should be determined and reported in rank order, tabular form. The urgency of programs to meet the measured needs should be clearly stated.

The following schematic summarizes the process of needs assessment in establishing program priorities and determining standards of performance.

$$\begin{array}{c} \boxed{\text{Needs}} \\ \left(\begin{array}{c} \text{Student} \\ \text{and/or} \\ \text{learners} \end{array} \right) \end{array} = \begin{array}{c} \boxed{\text{What should be}} \\ \left(\begin{array}{c} \text{Scope and sequence} \\ \text{of goals with both} \\ \text{professional and lay} \\ \text{contributions} \end{array} \right) \end{array} - \begin{array}{c} \boxed{\text{What is}} \\ \left(\begin{array}{c} \text{Measured by} \\ \text{performance} \\ \text{whenever} \\ \text{possible} \end{array} \right)$$

The following resources will help in conducting a needs assessment:

American College Testing Program, River City High School Guidance Services - A Conceptual Model, ACT Publications, P.O. Box 168, Iowa City, Iowa 52240, 1976. A step-by-step procedure handbook which focuses on career guidance and is easily adaptable to career education.

Blone, Orvin, C. and Rask, Glen D., Career Education Needs Assessment, Olympus Publishing Company, Salt Lake City, Utah, 1975. Includes instruments for both staff and students and uses both an expressed and measured needs approach.

McKinnin, Byron E. et al, Toward Accountability: A Report on the Mesa Approach to Career Guidance, Counseling, and Placement, Mesa, Arizona Public Schools. Illustrates an experimental approach to an expressed needs study emphasizing student reactions.

Mease, William P., and Benson, Loren L., Outcome Management Applied to Pupil Personnel Services. Division of Instruction, Pupil Personnel Services Section, Minnesota Department of Education, 1973. A humanistic approach to planning and needs assessment applicable to career education.

Prediger, D. J., Roth, J. D., and Noeth, R. J., Nationwide Study of Student Career Development: Summary of Results. ACT Research Report #61, November, 1973, P.O. Box 168, Iowa City, Iowa, 52240. A measured needs approach to career development, useful for its instrumentation as well as its results.

Rural America Series, Career Guidance Program Process Handbooks on Career Development Needs Assessment and Behavioral Objectives. The Center for Vocational Education, The Ohio State University, Columbus, Ohio. A complete detailed set of procedure handbooks designed for rural schools, but adaptable to other school settings.

Tennyson, W. Wesley, Hansen, Sunny L., Klaurens, Mary K., Antholz, Mary B., Educating for Career Development, 1975, Pupil Personnel Services, Division of Instruction, Minnesota Department of Education, St. Paul, Minnesota 55101.

INSTRUMENTS

Evaluation of a comprehensive career education program requires a variety of measurement instruments selected or tailor-made to fit local objectives. Techniques to measure the broad scope of student, staff, and program objectives include: pencil and paper tests, interviews, questionnaires, observation, simulation, sociometrics, and the use of other indicators; such as school records. Several measurement techniques will usually be needed to evaluate a specific career education program. Each evaluation technique has associated advantages and disadvantages. Each evaluation design will have costs and benefits.

Locally Developed Questionnaires

Questionnaires are an inexpensive and adequate way to measure expressed needs, opinions, general awareness, and reactions. Each specific major career education effort will probably warrant some type of participant survey to elicit specific suggestions and general opinions. Sample questions and formats from other sources can help a school develop its own questionnaires, but rarely will one find a developed questionnaire that can be used locally without some modification.

Questionnaires are more difficult to devise than they appear to be at first glance. Answers to most of the items should be easy for the individual to check off, rather than require written answers. Some open-ended responses are also usually useful, however.

If a general opinion or reaction is sought, some specific follow-up is usually needed. For example, if using the question:

I think _____'s career education SA A D SD
is effective.

follow-up responses are needed to interpret the answer, such as:

Career education is: (check all that apply)

- ☐ Job training
- ☐ Leisure roles preparation
- ☐ Part of all courses
- ☐ _____

Such questions will help define the reference points of the respondent and aid interpretation.

"Loading" the questions to elicit a specific type of reaction will usually yield little useful information in program decision making and will also endanger the credibility and influence of evaluation reports in general.

Several examples of questionnaires used to assist in the evaluation of staff development programs are found in Implementation Booklet #3 - Staff Development. Selected student questionnaires assisting in the evaluation of curriculum activities are found in Implementation Booklet #2 - Curriculum Development.

The following staff, student and community questionnaires are examples:

Teacher Reactions to the Curriculum Units after Field Testing
(N=27)

Question	Response	Percent
1. The format, objectives and learning activities in this mini-unit were	Clear Somewhat unclear Confusing	90 11 0
2. Was this mini-unit appropriate for the grade level?	Yes No	85 15
3. Would you like to teach this mini-unit again next year?	Yes No Not Sure	78 11 11
4. In general, the amount of student learning in this unit was:	High Moderate Little	26 70 4
5. In general, student reaction to the mini-units was:	Enthusiastic Moderate interest Uninterested	48 48 4
6. As a result of teaching this mini-unit, has your attitude toward career education changed?	Yes, more positive No, has not changed Yes, more negative	37 63 0

Student Perceptions of Benefits from a Sample of Curriculum Units

Indicate whether or not you have a better understanding of the following things as a result of working on this unit			
	Yes	No	Not Sure
<u>Exploring Clusters - English Grade 7</u>			
The terms: career, job, occupation leisure time	78%	7%	15%
The skills, abilities, and talents you possess that affect your future life choices	66	12	22
<u>Social Studies - Grade 9</u>			
Your goals toward a future career	70	13	17
The importance of planning for possible futures	84	9	7
<u>Home Economics - Grade 7</u>			
Your talents, interests, and needs	76	9	15
How choices you made now influence your future	65	18	18
<u>Significant Others - English Grade 8</u>			
How others influence my decision making	80	11	9
Who the important people are in my life	81	10	9
<u>Who Am I - English Grade 7</u>			
The terms: values, personality, interests	61	10	29
My own likes and dislikes	63	27	10
Expressing my own feelings in prose and poetry	41	22	37
<u>Science - Grade 9</u>			
Science processes are used in all careers	55	14	32
One does not have to be in a laboratory to use science	80	12	8

SURVEY OF SENIOR HIGH STUDENT ATTITUDES REGARDING CAREER DEVELOPMENT

Name _____ (Optional)
 Grade _____

1. How do you feel about the help available in picking electives? (Check as many as apply)
 - _____ a. about right
 - _____ b. too much help
 - _____ c. too little help - explain: _____

2. What did you consider in picking your electives? (Check as many as apply)
 - _____ a. teachers' advice
 - _____ b. counselors' advice
 - _____ c. parents' advice
 - _____ d. friends' advice
3. Have you had your school record (file in the Guidance Office) interpreted to you? _____ yes _____ no. If yes, what items? (Check as many as apply)
 - _____ a. standardized test results
 - _____ b. grades
 - _____ c. other information, such as teacher comments

A. If yes, how helpful was it? _____ much _____ some _____ none

B. If not, do you feel it would be helpful? _____ yes _____ no

C. How? _____

4. How much have courses you are taking or have taken in school influenced your thinking in terms of future education and career development? List the most influential courses: _____

5. How many different careers have you considered up to now?
 - _____ none
 - _____ 1
 - _____ 2-3
 - _____ 4-10
 - _____ more than 10
6. Are you interested in education beyond high school? _____ yes _____ no
 If yes, who has influenced you?
 - _____ parents
 - _____ teachers
 - _____ counselors
 - _____ friends
 - _____ religious contacts
 - _____ other

Survey of Senior High
Page 2

7. If yes, what type of education are you considering? (Check those that apply)

- ☐ a. Four-year college
- ☐ b. Junior college (two years)
- ☐ c. Technical or vocational school
- ☐ d. Other
- ☐ e. None

8. What type of encouragement for post high school education have you received?
Parents:

- ☐ encouraged college only
- ☐ encouraged college or technical or trade school
- ☐ no encouragement noticed

Teachers:

- ☐ encouraged college only
- ☐ encouraged college or technical or trade school
- ☐ no encouragement noticed

Counselors:

- ☐ encouraged college only
- ☐ encouraged college or technical or trade school
- ☐ no encouragement noticed

9. How do people important to you feel about your educational and vocational plans?

Approve

Disapprove

Don't Know

Parents _____
Teachers _____
Counselors _____
Friends _____
Others _____

10. What would you suggest for education on careers? (Check those that apply)

- ☐ a. more counseling
- ☐ b. more reading of autobiographies
- ☐ c. more classroom study of different jobs
- ☐ d. none of the above

11. List the school subject areas where different types of work (careers) have been discussed: _____

12. Who was the most helpful to you in making your present career decisions?
Indicate the order of importance by numbering 1, 2, etc.

- | | |
|------------------------------------|---|
| ☐ Teacher | ☐ Yourself |
| ☐ Counselor | ☐ Religious contacts |
| ☐ Parent | ☐ Job contacts |
| ☐ Friend | ☐ No one |

Survey of Senior High
Page 3

13. Who was most helpful in exposing you to the ideas of work and different occupations? Indicate the order of importance by numbering 1, 2, etc.

☐ Teacher	☐ Yourself
☐ Counselor	☐ Religious contacts
☐ Parent	☐ Job contacts
☐ Friend	☐ No one

14. Was there anyone in high school available to talk about occupations, to listen to your interests and evaluate your capabilities? ☐ yes ☐ no
If so, what area did he/she represent? (Examples: math, counseling, science, industrial education, etc.) _____.

15. Is there a need for more specific programs in helping students to make career decisions in all academic areas? ☐ yes ☐ no.

a. at what grade level? _____
b. in what specific areas? _____
c. any specific programs? _____

16. Was the 9th grade vocational unit worthwhile? ☐ yes ☐ no. If yes, check the areas where your knowledge was increased:

☐ self-knowledge	☐ knowledge of vocations
☐ skill in decision making	☐ knowledge of educational opportunities

17. How helpful were the results of interest inventories used in the vocations unit?

☐ very helpful
☐ some help
☐ no help

18. Do you feel that an elective course at the senior high level should be offered which is specifically designed to aid a student in post high school planning? ☐ yes ☐ no ☐ don't know.

If yes, what would you like to have included in this course? Check as many as apply:

☐ self-knowledge	☐ knowledge of vocations
☐ skill in decision making	☐ knowledge of educational opportunities

COMMUNITY REACTION SURVEY

Career Development Program

Date _____

1. In general, I am aware of the Career Development Program

☐ Yes ☐ No ☐ Unsure

2. The major objectives of the program, as you see them, are:

Please rank, 1 - being the highest priority objective

7 - being the lowest priority objective

- ☐ a. Meet national manpower needs
- ☐ b. Develop specific student job skills before graduation
- ☐ c. Integrate vocational and academic education
- ☐ d. Help students select an occupation before graduation
- ☐ e. Increase the use of community resources
- ☐ f. Create an awareness of the world of work
- ☐ g. Impossible to determine
- ☐ h. Other _____

3. In your opinion, are parents supportive of this type of program?

☐ Much ☐ Some ☐ Little ☐ No support

4. Are you supportive of this program?

☐ Much ☐ Some ☐ Little ☐ No support

General comments:

5. Up to now my involvement in the Career Development Program has been: (check all that apply)

- ☐ a. As a parent
- ☐ b. As a community employer
- ☐ c. As a class resource speaker
- ☐ d. As a school-community tour host
- ☐ e. Other
- ☐ f. None

6. I would be willing to be involved in the Career Development Program in the following ways: (check all that apply)

- ☐ a. As a class resource speaker
- ☐ b. As a school-community tour host
- ☐ c. As a personal interview subject
- ☐ d. Other
- ☐ e. Not sure

Community Reaction Sureey

Page 2

7. I am answering this survey as a:

- ☐ a. Parent
- ☐ b. Business representative
- ☐ c. Civic organization member
- ☐ d. Educator
- ☐ e. Other

THANK YOU

Gentlemen: I would like to assist in the following way:

☐ Resource Speaker ☐ Field Trip Sites ☐ Personal Interview Subject

NAME _____

Please Print

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ OCCUPATIONAL AREA _____

Locally Developed Tests

Developing tests is a relatively expensive effort in terms of staff time; however, there are several benefits. Rarely will national or regional tests adequately measure all major local objectives. The following section on norm referenced tests will describe specific tests which may adequately measure many student learning objectives.

Career education tests are increasing in both quality and quantity. By carefully selecting norm referenced tests and other "ready-made" instruments, a school district can concentrate on developing tests only for the deficient areas. Potential benefits from developing tests include the opportunity to design items for every major learner objective, and to involve teachers and other staff in an evaluation process that generates confidence and develops practitioner measurement evaluation skills.

The involvement of teachers and other school staff in developing the instructional objectives for specific career education activities and refining the instructional strategies as a result of evaluation results, is facilitated by locally developed tests. Test items and questionnaires can be reviewed by the instructional staff before the teaching takes place and the results reviewed after the instruction period. Teachers are more willing to use evaluation results if they have had veto power, in a sense, over the tests and other evaluation instruments used to evaluate instruction. Sometimes the instructional objectives are revised along with instructional strategies, the test, and questionnaire items. A more detailed curriculum development and field testing discussion is found in Implementation Booklet #2 - Curriculum Development.



Several factors must be considered in developing test items:

- | | |
|-----------------|-----------------|
| ... clarity | ... difficulty |
| ... readability | ... validity |
| ... scorability | ... reliability |

Item formats, sex role, age and social stereotyping are other factors.

Clarity and readability of test items can be improved greatly by using the items with a small number of students from the target group. An interview format will gain the most information in a short time.

"Scorability" refers to the need to have items with a desirable response. Factual items are easy, higher level conceptual items may require having two or more staff score the items independently and seek consensus, by revision if necessary. Attitude items, often of a "strongly agree," "agree," "strongly disagree" nature, also should have a predetermined desirable weighted scoring. Every item that is to be used in evaluation should have a predetermined desirable answer. This step is often neglected! Item

difficulty may be grossly estimated with some pilot interviews but usually require some larger group testing. In general, items that approximately fifty per cent of the students get correct on the pretest are desirable. For test motivation a few easy items are also useful. Items that are very difficult are frustrating and may stimulate guessing. Items that are very easy won't measure growth in learning.

"Validity" refers to the extent to which an assessment tool measures what it is supposed to measure. In designing tests, questionnaires, interviews, or other assessment devices, it is important to sample all the major instructional objectives (content validity). Often two different methods of assessing the attainment of an objective is available for comparison (concurrent validity). For example, an achievement test measuring a student's knowledge of cooperation and teamwork may be compared to observations of behavior in a classroom group activity.

Assessing the current achievement or attitudes of students in order to predict their future achievements and attitudes (predictive validity) is often the most difficult.

For example, if one wishes to assess whether the student's decision-making skills, as demonstrated by the use of study and leisure time are consistent with personal goals in order to predict skills needed in post high school career planning, we need longitudinal data. Often we use school records, behavioral observations and/or tests as indirect indicators of the attainment of instructional goals when direct measures are not feasible (construct validity). For example, direct measures of work values or positive self concepts are difficult to make, but we might infer such qualities by tests of awareness and understanding of worker contributions and personal talents as well as by observing student interaction with others. Both predictive validity and construct validity involve a great number of assumptions. Measuring what students are actually learning right now, and relating such learning or lack of learning to specific activities, is challenge enough for most schools!

The "reliability" of assessment procedures refers to the consistency or stability of the test, questionnaire, interview or observation ratings, either over time or across items or samples made at the same time. In general, clear directions, pilot use of the assessment techniques with interviews and larger item samples will increase reliability.

Another concern in the assessment of needs and the evaluation of instruction is potential public objections to invasion of privacy which can be a particularly sensitive issue in the areas of self concept and interpersonal skills. An honest explanation to all relevant staff and students as to the purpose and use of the information is a necessary ethical responsibility.

More detailed guidelines on developing test items and other evaluation instruments can be found in:

Bonnet, Deborah G., Checklist for Reporting Results of Student Outcome Studies in Career Education, New Educational Directions, Inc., Crawfordsville, Indiana 47933. Prepared under a U.S. Office of Career Education Grant, 1977.

Young, Malcolm B., & Smith, Russell G., Education and Educational Decision-Making: A Functional Guide to Evaluating Career Education. Development Associates, Inc., Washington, D.C., 1975. Prepared for HEW - Office of Education.

CONTENT - CRITERION - DOMAIN
REFERENCED INSTRUMENTS

The least pretentious concept of testing and measurement is to design a content referenced test or assessment instrument. Basically the instruction or program objectives are listed, refined with the elimination of minor or peripheral outcomes and cross referenced with the instrument items. Several items would be designed to measure each major instructional objective. Some balance of numbers of items measuring each major objective would be required to minimize gaps and overlap and to maintain reasonable length. Ideally every known instructional objective will have at least two or three assessment items.

Another goal, in the over all evaluation design, is to have at least two different types of assessment techniques measuring each general instructional goal. For example:

Major instructional goal: To develop decision-making skills

	<u>Test Items</u>	<u>Observational Items</u>
Major Instructional Objective #1	1	1
	2	1
	3	2
Major Instructional Objective #2	4	3
	5	4
	6	
	7	
Major Instructional Objective #3	8	Simulation Problem
	9	1
	10	
Etc.		

A common experience is to have staff members including many more instructional objectives than it is realistic to expect to impact in the scope of the instructional treatment. Many times instructional objectives will be cited that are of the nature of "I would hope they will learn that...", or "These are my long range expectations...", etc. Sometimes the only experience that will help staff become more realistic in determining major instructional objectives and identifying teaching strategies which directly teach specific objectives, is to go through the entire process of stating objectives, designing assessment instruments, pre and post testing, reviewing results and relating instructional strategies. Usually in this evaluation process all three segments - objectives, assessment instruments, and instructional methods - will be revised for the second field testing.

A criterion referenced evaluation instrument may be a content referenced instrument, but with the addition of stated standards or criteria of per-

performance. The content referenced approach compares assessment items with specific instructional objectives and strategies. The criterion referenced approach compares item results with predetermined standards of performance. One might establish several levels of competencies, such as minimal, adequate and optional. Specified items or percentages of items correct on an assessment instrument might be related to the various levels of competencies. For example:

Major instruction goal: To develop decision-making skills

		<u>Test Items</u>	<u>Observation Scale Items</u>
Minimal Competency (Objectives 1-5)	Major Instructional Objective 1	1	1
		2	2
		3	
	Major Instructional Objective 2	4	3
		5	4
		7	
Adequate Competency Objectives 1-8)	Major Instructional Objective 3	8	Simulation Problem
		9	
		10	
Optional Competency (All 10 objectives)	Major Instructional Objective 4	.	.
		.	.
		.	.
	Major Instructional Objective 5	.	.
	.	.	.
	.	.	.
	.	.	.
	.	.	.
	.	.	.
	10	50	

One might establish 50% or 75% correct on the 50 item test on decision-making as minimal competency and correspondingly higher figures for adequate and optional competencies. Similiar percentage standards could be established for the observation, simulation and any other assessment techniques used. Another approach would be to designate specific objectives, that is, 1 - 5 as minimal competency, 6 - 8 as adequate and all 10 as optional.

The difficulty with a criterion referenced approach is knowing enough about the competency area to be able to realistically establish standards of performance using specific assessment items. One suggestion would be to start an evaluation program with a combination of standardized instruments selected to support local objectives and locally developed content referenced instruments. As the knowledge base for career education competencies improves along with local evaluation efforts, a criterion referenced approach can be started. Standards are needed, but they must be based on instructional experience and detailed knowledge of the career development processes being assessed.

Domain referenced assessment instruments present the ultimate measurement challenge. Assessment instruments that are domain referenced assume to be a sample or a broad competency area. For example, if decision making and career planning is considered a general competency area or domain, then

the assessment instrument should sample all of the significant aspects of decision making and career planning.

Particular content related items based on specific instructional activities would not be included in a domain referenced instrument. General attitude tests often generate similar assumptions about sampling domains such as verbal reasoning or mechanical reasoning. Domain referencing is a concept that helps test developers focus on instructional objectives that are process orientated and reflect skills and attitudes that generalize and transfer. It would be pretentious to claim that one's locally developed assessment instruments are domain referenced, in that we lack sufficient specific knowledge of the various career development processes. To adequately sample such complex domains as self concept, career decision making, interpersonal skills, etc., will require resources far beyond those of any one school district. We can still keep the concept of domain referencing in mind as we develop and use content, criterion and norm referenced instruments.

The following are examples of locally developed content referenced tests which attempt to measure the major instructional objectives most representative of general career development competencies:

Career Development Evaluation - Grades K-2

1. Do many people work during the night?
2. Do some people have to work during Christmas vacation?
3. Do all dads have the same job?
4. Does it sometimes take many people to do some jobs?
5. Do some people work just to help other people?
6. Can only men be workers?
7. Is the only reason people work to earn money?
8. Can mothers have a job away from home?
9. Can doing a good job make you happy?
10. Is work always fun?
11. Does a school have many workers?
12. Do all people like their jobs?
13. Can work be fun?
14. Do many people have jobs in factories?
15. Do all workers make the same amount of money?

16. Do many people have jobs in hospitals?
17. Can only girls be nurses?
18. Can only boys fly airplanes?
19. Can people be happy doing different kinds of jobs?
20. Do all workers have to be strong?
21. Are you better at doing some things than your best friend?
22. Do your friends like to do all the same things you do?
23. Should everyone want to be rich?
24. Can you think of three things you like about yourself?
25. When you grow up will there be many kinds of work you can do well?
26. Do all boys want to be pilots or mechanics?
27. Do all girls want to be nurses or teachers?
28. Do some boys like to cook and bake?
29. Will you do the same job as your father or mother when you grow up?
30. Would some people like to be a policeman but other people would not?
31. When you work in a group must you do your share?
32. To get along with my friends in a group I should always do what I want.
33. Could your friends help you do some jobs?
34. Can you only work with your friends if you all want to do the same thing?
35. Is every person in a group important?
36. Do you often have to work with someone else on a job?
37. Do you sometimes have to take orders in a group?
38. Do most workers need the help of others to do their job?
39. Do you sometimes have to give orders in a group?
40. Can other people sometimes help you with problems?
41. If you really want something do you have to plan for it?
42. If we spend all our money on candy today might we wish we had more money tomorrow?

43. If you tease someone, will that person usually feel happy?
44. Do you sometimes plan what you are going to do next week?
45. If you do something wrong, will you usually feel good?
46. If you work harder will you do better in school?
47. Once you decide to do something should you ever change your mind?
48. Do parents sometimes make plans that don't work out?
49. Is there usually only one way to solve a problem?
50. Do people change their minds many times about what kind of job they want?

Career Development Test - Grades 5-6

True or False: On the answer sheet put an X over T if the answer is true and an X over F if the answer is false.

1. People enjoy work mainly because it lets them buy the things they want.
2. It doesn't matter what job you choose as long as it pays well.
3. Most people find work to be dull and unpleasant.
4. Today most jobs are done working alone.
5. A job that's a good job today will be a good job when you grow up.
6. A college education is needed for getting a good job today.
7. A person can do any kind of work as long as he tries hard.
8. Math is not important if you are going to be a mechanic or electrician.
9. Automation (the use of machines) is having little or no effect on the employment future.
10. A person's personality has much to do with being fired from one's job.
11. Only those with good grades can expect to get education after high school.
12. Absence or tardiness in school doesn't hurt your job chances.

Multiple Choice: Choose the correct answer then put an X through the correct choice on the answer sheet. Example A B C D, means that D is the right answer.

13. At this time there are how many different types of work (jobs)?

A. 1,000	C. 10,000
B. 5,000	D. over 20,000

14. Based on what we know, jobs for women are likely to:

A. increase	C. stay the same
B. decrease	D. go up and down
15. Choose the most important job from the following?

A. bricklayer	C. policeman
B. engineer	D. all are equal
16. Each individual because of special abilities, talents and interests is best suited for:

A. one job	C. a group of jobs
B. most jobs	D. any job of interest
17. In the next 10 years, the need for workers with no training is likely to:

A. increase	C. stay the same
B. decrease	D. we don't know
18. Education and training requirements for jobs are likely to:

A. increase	C. stay the same
B. decrease	D. we don't know
19. In the next 10 years the need for farmers is likely to:

A. increase	C. stay the same
B. decrease	D. we don't know
20. The use of computers has caused jobs with little training to:

A. increase	C. stay the same
B. decrease	D. we don't know

True or False: On the answer sheet put an X over T if the answer is true and an X over F if the answer is false.

21. I take real pride in doing a job well.
22. A person can do any kind of work he wants as long as he tries hard.
23. Some people think their job is really fun.
24. When I grow up there will be many different kinds of jobs I can do.
25. I'm good at doing many different kinds of things.
26. Boys are always more interested in sports and mechanics than girls.
27. What you like to do is more important than what you are good at.
28. Often a person's interests and abilities are similar.
29. All you really need to go to college is the money or a scholarship.
30. Everyone should at least try college.
31. In order to make a good group decision you need to listen to the opinion of every member.

32. One person in a group should be responsible for doing most of the work.
33. In order to be a group the members must share some of the same interests and goals.
34. Group leaders usually don't take part in what the group members are doing.
35. There is always only one leader in a group.
36. When you don't understand someone you should pretend you do so you won't hurt their feelings.
37. In many jobs you can give orders but you don't have to take orders.

Multiple Choice: Choose the correct answer then put an X through the correct choice on the answer sheet.

38. To work well in a group the thing we might have to change is:

A. our hobbies	C. our friends
B. some of our ideas	D. where we live
39. The major reason that people get fired from their jobs is:

A. poor training	C. carelessness
B. poor attendance	D. can't get along with other people
40. A person in a group is helpful because of:

A. the knowledge he has	C. the location of the group
B. the size of the group	D. his age
41. In career planning, each student should study:

A. one occupation (job)	C. all occupations
B. three occupations	D. the skills of personal planning

True or False: On the answer sheet put an X over T if the answer is true and an X over F if the answer is false.

42. Each student should plan for one job to last a lifetime.
43. Why worry about choosing a job when you don't have anything to say about it anyway.
44. It is almost impossible to plan your life in advance because so much depends on the breaks you get.
45. Upon graduation from high school, a final career choice should be made.
46. Good luck is more important than hard work for success.
47. A student's use of leisure (free) time has little to do with his/her educational and occupational future.

48. Before we make a decision we should carefully consider the results.

49. Most people remain on the same job their entire lives.

50. A student's resources for planning include his time, skills, and effort.

Roseville Area Schools
Clusters Test - Junior High

Name _____
Class _____
Date _____

Indicate the extent to which you agree or disagree with each of the statements by circling one of the following choices:

SA if you strongly agree with the statement

A if you agree with the statement, but not strongly

D if you disagree with the statement, but not strongly

SD if you strongly disagree with the statement

DO NOT circle between the choices or more than one choice.

Objectives I - II (Self Appraisal and Decision Making)

- | | | | | |
|--|----|---|---|----|
| 1. Most jobs at the same salary level have the same requirements. | SA | A | D | SD |
| 2. Different people have different reasons for selecting a job. | SA | A | D | SD |
| 3. Studying about occupations can wait until senior high school. | SA | A | D | SD |
| 4. Work can be both paid and unpaid activity. | SA | A | D | SD |
| 5. Work is always something you don't like to do. | SA | A | D | SD |
| 6. The kind of job you have has little to do with your leisure time. | SA | A | D | SD |
| 7. The kind of job you have has little to do with your social life. | SA | A | D | SD |
| 8. The kind of job you have has little to do with your family life. | SA | A | D | SD |
| 9. The courses that you choose in school have a lot to do with the kind of job you will have when you are older. | SA | A | D | SD |
| 10. Each student should plan for one job to last a lifetime. | SA | A | D | SD |
| 11. School activities and hobbies can be important for a job in the future. | SA | A | D | SD |

Objectives III (Career life style exploration)

Rate the need for the following skills for each occupation (12-27)

(Occupation)		Used Much	Used Some	Used little		
Newspaper reporter	12. Reading	_____	_____	_____		
	13. Writing	_____	_____	_____		
	14. Speaking	_____	_____	_____		
	15. Listening	_____	_____	_____		
Auto. Mechanic	16. Reading	_____	_____	_____		
	17. Writing	_____	_____	_____		
	18. Speaking	_____	_____	_____		
	19. Listening	_____	_____	_____		
Florist	20. Reading	_____	_____	_____		
	21. Writing	_____	_____	_____		
	22. Speaking	_____	_____	_____		
	23. Listening	_____	_____	_____		
Lawyer	24. Reading	_____	_____	_____		
	25. Writing	_____	_____	_____		
	26. Speaking	_____	_____	_____		
	27. Listening	_____	_____	_____		
28. A student's use of leisure time has little to do with his/her educational and job future.			SA	A	D	SD
29. In general, students should explore several interest areas in school.			SA	A	D	SD
30. In order to choose a job, you need to know what kind of person you are.			SA	A	D	SD
31. Interests are largely inherited.			SA	A	D	SD
32. Interests and abilities are the same things.			SA	A	D	SD
33. In most jobs you do the same thing all day.			SA	A	D	SD
34. Volunteer activities can be valuable experiences for a job.			SA	A	D	SD

35. It's probably just as easy to be successful in one job as it is in another. SA A D SD
36. A person can do any kind of job as long as they try hard. SA A D SD
37. In my future there will be many kinds of jobs I can do. SA A D SD
38. School grades count for getting into trade and technical schools. SA A D SD
39. Absences or tardiness in school does not hurt your chances. SA A D SD
40. Some English skills are required in most jobs. SA A D SD

Multiple Choice. Put the letter of the best response in the blank.

41. Each person because of abilities and interests is best suited for:
 a. one job
 b. most jobs
 c. a group of jobs
 d. any job of interest
42. The best single source of information for job research is the:
 a. Occupational Outlook Handbook
 b. Newspaper want ads
 c. Dictionary of Occupational Titles
 d. Career World

Roseville Area Schools
 Decision Making - Junior High

Name _____
 Class _____
 Date _____

Indicate the extent to which you agree or disagree with each of the statements by circling one of the following choices:

- SA if you strongly agree with the statement
- A if you agree with the statement, but not strongly
- D if you disagree with the statement, but not strongly
- SD if you strongly disagree with the statement

DO NOT circle between the choices or more than one choice.

1. Before making a decision one should consider all of the alternatives. SA A D SD
2. The decisions that a teenager makes do not usually affect his/her future. SA A D SD

3. I don't think that I will make any important decisions today.	SA	A	D	SD
4. People have a lot of control over what happens to them.	SA	A	D	SD
5. Wise decision-making follows a step-by-step process	SA	A	D	SD
6. Getting up in the morning is an example of a conscious decision.	SA	A	D	SD
7. There are usually only two choices or alternatives to choose from when making a decision.	SA	A	D	SD
8. I am confident that I can make a good decision if a problem situation were to come up.	SA	A	D	SD
9. Things happen to us mostly by chance.	SA	A	D	SD
10. I won't have to make many important decisions until I finish high school.	SA	A	D	SD
11. An important part of decision-making is to know what you want to accomplish.	SA	A	D	SD
12. People of different ages make different decisions.	SA	A	D	SD
13. Knowing how to plan and make decisions can be a helpful skill.	SA	A	D	SD
14. Planning and career decision-making are things you do all through your life.	SA	A	D	SD
15. The decisions you make now may have a big effect on your life in later years.	SA	A	D	SD
16. One of the steps in good decision-making is to consider the results of following a certain course of action.	SA	A	D	SD
17. I don't know how to go about making decisions.	SA	A	D	SD
18. Only adults make important decisions.	SA	A	D	SD
19. One should go through the same steps when making any kind of decision.	SA	A	D	SD
20. A decision you make today might be changed tomorrow.	SA	A	D	SD
21. It's a waste of effort to try to plan your life because so many things happen just by chance.	SA	A	D	SD
22. Once you reach fifty years of age, there are not many more decisions to make.	SA	A	D	SD

Listed below are several actions that might be taken to arrive at a decision. Indicate for each action whether or not you think that the action is part of a good decision-making process by circling YES or NO.

- | | | |
|---|-----|----|
| 23. Stating the goal one expects to achieve. | Yes | No |
| 24. Waiting to see if the problem solves itself. | Yes | No |
| 25. Gathering information about the decision. | Yes | No |
| 26. Checking with friends to see what they would do. | Yes | No |
| 27. Listing the possible choices that could be made. | Yes | No |
| 28. Asking your parents to decide for you. | Yes | No |
| 29. Flipping a coin (heads I do one thing, tails another). | Yes | No |
| 30. Studying the possible results or consequences of each choice. | Yes | No |

Listed below are several decisions that people make. In the space before each decision, indicate the amount of time and effort you think one should spend making that decision:

1. Little time.
2. Moderate amount of time; ask someone else for their opinion, too.
3. A great deal of time; study the situation thoroughly.

- _____ 31. What career to choose.
- _____ 32. Whether or not to smoke.
- _____ 33. To be on the school gymnastics team or the debate team.
- _____ 34. To go to college or get a job right out of high school.
- _____ 35. To get a part time job during high school.
- _____ 36. What to have for breakfast.
- _____ 37. What to spend your week's allowance on.
- _____ 38. To go to a movie with friends or stay home and study for a test.
- _____ 39. What time to go to bed.
- _____ 40. To quit school before graduation.

The following selected test items were designed to assess a foreign language quarter course stressing views of careers in different cultures and using role playing.

Roseville Area Schools
Foreign Language Unit - Senior High

Name _____
Class _____
Date _____

1. Name five occupations that require an extensive knowledge of German, Spanish, etc. and five occupations that require some knowledge, but where it is not a primary part of the job.

Extensive

Some

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |
| 5. _____ | 5. _____ |

2. As of now I see French, Spanish, etc. in relationship to my future style of life as:

_____ Very Important _____ Important _____ Of Little Importance
_____ Of No Importance

Respect for Various Occupations

3. Choose the most important job from the following:

_____ 1. Bricklayer	_____ 3. Custodian
_____ 2. Scientist	_____ 4. All of the above

- Indicate the extent to which you agree or disagree with each of the statements by circling one of the following choices:

SA if you strongly agree with the statement

A if you agree with the statement, but not strongly

D if you disagree with the statement, but not strongly

SD if you strongly disagree with the statement

DO NOT circle between the choices or more than once choice.

- | | | | | |
|--|----|---|---|----|
| 4. All honest work, whatever it may be, deserves recognition. | SA | A | D | SD |
| 5. Cashiers at a store can be just as proud of their work as doctors can of their work. | SA | A | D | SD |
| 6. I don't think anyone would get much satisfaction out of being a garbage collector. | SA | A | D | SD |
| 7. I'd rather be unemployed than work at some jobs. | SA | A | D | SD |
| 8. A woman who works full time outside of the home cannot be as good a mother to her grade school age children as one who stays at home. | SA | A | D | SD |
| 9. Any woman, married or single, should receive the same pay for a particular job as a man would. | SA | A | D | SD |
| 10. A girl's college education is more often wasted than a boy's. | SA | A | D | SD |
| 11. Women tend to solve problems emotionally; men tend to solve problems by thinking. | SA | A | D | SD |
| 12. Nothing can be more satisfying to most women than a well kept home, clean and neatly dressed children and a good meal always ready for their husbands. | SA | A | D | SD |
| 13. Men are meant to lead; and women, in most cases, to follow. | SA | A | D | SD |
| 14. A married woman with young children is justified in having a career outside the home simply because she wants it. | SA | A | D | SD |
| 15. Career planning after high school is not as important for a girl as for a boy. | SA | A | D | SD |
| 16. Man is traditionally the breadwinner and woman is the homemaker, and we should try to keep it that way. | SA | A | D | SD |
| 17. Women who have a career should not be taking jobs away men. | SA | A | D | SD |
| 18. Women handle routine, detailed tasks better than creative and imaginative tasks. | SA | A | D | SD |
| 19. A wife's opinion should have the same bearing on important decisions for the family as the husband's. | SA | A | D | SD |
| 20. Girls should feel free to become auto mechanics if that is what they would like to do. | SA | A | D | SD |
| 21. Men should never be expected to do the dishes except in emergency situations. | SA | A | D | SD |

- | | |
|---|--------------------|
| 22. Few women have the characteristics to compete in what traditionally has been man's work world, such as in economics and politics. | SA A D SD |
| 23. With rare exceptions, there are no areas of work today in which women cannot perform efficiently. | SA A D SD |

The instructional packages outlining the curriculum activities being evaluated are described in Implementation Booklet #2 - Curriculum Development.

Norm referenced tests are the best known evaluation instruments. Most standardized tests are norm referenced, in that the performance of an individual student is compared with a norm group. Recently several tests attempting to measure some of the objectives of career education have been developed. Selected examples will be briefly annotated:

Career Maturity Inventory - Attitude Scale, by John D. Crites, CTB/McGraw Hill, Monterey, California, 1973. The attitude scale contains 50 items covering the areas of responsibility in career planning with coverage of career exploration and the values of planning a vocation. The inventory results require careful interpretation as there is some evidence to indicate that as students come closer to choice points, their concerns about career planning increase. In this case, career maturity is not a straight line improvement in scores. The Career Maturity Inventory might best be used as a content referenced instrument to measure student growth as a result of some concentrated instruction in career decision making. Since it samples only two or three objectives in the decision making domain it would need to be supplemented with other instruments.

Assessment of Career Development (ACT) by D. J. Prediger, J. D. Roth and R. J. Noeth. ACT Research Report, #61, November, 1973, the American College Testing Program, P.O. Box 168, Iowa City, Iowa, 52240. The ACT Scales, as mentioned previously, were used for a nationwide needs assessment, but have also been found useful as evaluation instruments. Items cover career exploration and the career planning process. Both attitudes, knowledge and amount of participation in career development activities are included.

Career Skills Assessment Program, College Entrance Examination Board, 888 Seventh Avenue, New York, New York, 10019, (212) 582-6210. Five tests are being developed covering personal appraisal skills, career awareness skills, decision making skills, employment seeking skills and career satisfaction skills. The instruments are currently being field tested.

Technical Assistance in Evaluating Career Education Projects: Instrument Catalog and Turnkey Manual. National Testing Service, Inc., 1905 Chapel Hill Road, Durham, North Carolina, 27707, (919) 493-3451. A series of evaluation instruments and procedures field tested with 15 National Career Education Demonstration Projects during the 1976-77 school year.

APPLIED PERFORMANCE MEASURES

Defining career development in terms usable by educators and understandable to students is a necessary first step in the career education instruction process. Applied performance assessment activities (the measurement of performance in an actual or simulated performance setting) can be developed to facilitate student self-evaluation, student goal-setting and educator-student planning of learning experiences.

Several years of extensive experience with career development programs, K-12, have shown the need for practical assessment activities that can be conducted in classroom settings, small groups, and individual interviews by teachers, teacher-advisors and counselors. Applied performance methods might include: work samples, interviews, observation, performance rating sheets, role-playing and simulation. The essential characteristics of applied performance methods are:

- a. Systematic measurement*
 of
- b. Observable behaviors,
 defined in terms of
- c. Either process or product or both,
 in
- d. Real or simulated environments
 where
- e. Previously learned concepts and skills
 can be applied in problem situations
 derived from
- f. The goals of the individual or organization.

*Modified from an essay by Hugh F. McKeegan, Bucknell University.

Applied performance assessment activities involve the student in meaningful activities which provide learning, as well as competency assessment. Parents can also be involved in specific activities, as well as in the interpretation of performance.

Students, parents and educators can build upon specific strengths and weaknesses in setting goals for future education and career and lifestyle activities.

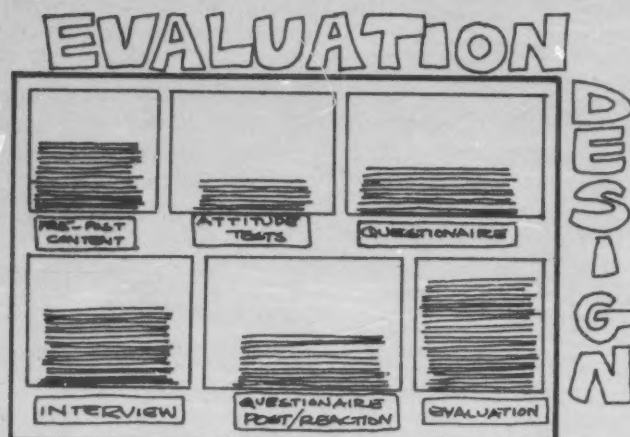
The intention is not to eliminate standardized testing and other assessment methods, but to add alternatives to such methods. The need for alternative ways to assess student performance will increase with the trends in accountability, planning and competency in education.

Examples of using applied performance measurement in evaluation will be described further in the following section on evaluation design, The Case Study, page 41.

EVALUATION DESIGN

General Considerations

Each evaluation design will, obviously then, have varying costs and varying levels of assumptions. The more precise the objectives and instruments, and the more extensive the control of the treatment and provision for establishing standards for judging, the more certainty that can be applied to the results.



Each major career education component will present design challenges. It's highly unlikely that one instrument battery or one design will be adequate for evaluating a comprehensive career education program. By definition, evaluation design means the overall plan for evaluating all major program components. Each program area, for example staff development, will have its particular component evaluation design, which in turn becomes part of the overall design. Long term staff development

activity evaluation, thus might include a pre-post content referenced knowledge and attitude test and a follow up interview or questionnaire. Short-term staff in-service activities might be evaluated with a post, reaction questionnaire only. The content referenced testing may or may not have a control group depending upon feasibility. The staff testing and survey plan would become one part of the overall evaluation design, which would include student learning, context description, community impact measures and possibly other areas such as general organizational objectives.

The most intriguing aspect of evaluation design is to devise practical ways of determining what effect a particular program had on its individual target groups. The logic, ethics and precision of educational evaluation should equal that of basic research in the social sciences; however, the preciseness of measurement and control will usually be far less. Generally the cost of an evaluation design should be estimated before starting and compromises made where necessary to keep costs congruent with the rest of the project. Obtaining or developing instruments that measure the relevant objectives is usually the most time consuming aspect of evaluation. Assuming the objectives are realistic and measurable, the quality of the assessment instruments is likely to be the biggest determinant of the evaluation program. The most sophisticated and precise evaluation design will not disguise inaccurate instrumentation.

Finding a control group or some method of showing the effects of treatment vs. no treatment is a major design problem.

How to determine what treatment groups or individuals to assess is another design question, as is the question of when to take such measurements.

Sampling considerations will be discussed in a following section on data collection.

Pre - Post Designs

Measuring learners before the treatment and again after treatment with the same or functionally equivalent instrument(s) is one way of searching for the effects of a given treatment. The pre - post testing must use the same instrument or alternative forms of the same instruments. This design is not cumbersome if the instruments are not too time consuming and staff and students see the need for repeating a test, survey, or other evaluation scale. Generally the pretest and post tests should be administered as close to the treatment time as possible to rule out the effects of other in or out of school experience. The students' names are required on the responses so that any pre and post changes can be noted. Sometimes descriptive item analysis is the most appropriate way of analyzing and interpreting and reporting the data. Some standards of comparison will be needed to evaluate the merit of any changes in pre and post scores. If the instruments are norm referenced, comparisons might be made with the publishers' results. The testing would have to follow the standardized procedure in the test manual.

If the assessment instruments are criterion referenced some statements can be made about the status of student competency; however, to attribute any measured growth to the treatment would require a control group. Comparing pre - post results with a control group is a way of checking to see if any changes are due to maturation, chance factors or other events outside of the treatment being evaluated.

The control group might be a group matched with the treatment group on pretest results and other factors that might affect performance, such as age, grades and scholastic aptitudes. Generally the matched control group design is difficult in a school setting. It is often feasible, however, to find control groups of previously scheduled instructional groups such as class sections. For example, if an 8th grade English unit on decision making is to be field tested, the control group might come from teacher X's classes while teacher Y's class participated in the unit. Teacher X's classes could study the unit after the post testing - an example of a "delayed treatment control group." The factor of teacher differences is not adequately controlled and ideally both teachers might teach some sections first and then the control sections. Typically, teachers find it very difficult to double schedule their preparations and this becomes one of the common compromises in an evaluation design. If several teachers should get positive results from teaching the unit, the results become more generalized.

Whenever possible the classes used as control groups should be examined in terms of "known-biases." Known biases would be non-treatment factors that in all probability would affect the results.

For example, using a group of low achieving students as a control for a high achieving group would take away any opportunity for evaluating effects. The reverse situation would also be worthless.

Any control group whether it be formally matched, a random sample or a class section with no known bias, should take the same pre and post test administered in the same time frame and manner as the treatment group. Just taking a pretest can sensitize people and be a learning factor in itself.

Post Only Designs

To avoid the time and efforts of pretesting as well as the sensitization effect, a post test with a random control group is another recommended evaluation design. The difficulty is to be able to use some randomization process to identify a control group. Campbell and Stanley (1963) point out that pretesting is not necessary and that the randomization is the assurance of lack of initial biases between groups. The post only design is likely to be no more inconvenient than matching pre - post control groups and therefore is preferred whenever feasible. Again it must be pointed out that matched class sections based on no known biases is the most likely design for curriculum field testing, even though its results need to be more qualified.

A Case Study Repeated Measures Design

Instead of gathering a small amount of data on large groups on a pre - post or post only approach over several days, weeks and months, a large amount of data can be gathered over months or years on a small number of individuals.

The case study approach has often been discredited because of the difficulty of generalizing the results to larger groups. If several schools could replicate similar results with a case study approach the results could be validated.

The case study approach has several potential advantages, including:

- ... Opportunities to compare and validate various assessment instruments.
- ... The relative ease in presenting results to lay groups.
- ... Opportunities to find unintended side effects of programs.
- ... Strengths and weaknesses in a career education program are portrayed in the experiences of students.

The case study approach also presents several difficulties:

- ... The gathering and reporting of data is time consuming.
- ... The objectivity of some assessments might be questioned.

... The individuals selected for evaluation need to invest a great deal of time and therefore, deserve periodic interpretations.

... Revision of the instruments diminishes longitudinal results.

Case Study Repeated Measures Example

The following example of a case study repeated measures evaluation design is drawn from a two-year pilot project in the Roseville Area Schools.

In order to more clearly see the effects of exposure to a variety of career education activities, a group of 25 junior high students in one building were selected for a five-year study with yearly reporting of results to the students, teachers, and other decision makers. The assessment and recording activities were coordinated by the career learning center specialist, but such activities could have been carried out by a counselor or teacher-advisor. Some instruments were administered as part of regular classroom instruction in career education, other instruments were administered in small groups and individually by the career learning center specialist.

Thirteen student learning objectives were selected to be assessed from the approximately eighty objectives in the Roseville plan. The objectives selected or developed to measure each objective and represented content referenced, norm referenced and applied performance approaches. The instruments can be found in the appendix and include:

- ... The Roseville Career Development Test, Appendix item, page 62
A locally developed content referenced test with local norms designed to be administered pre - post in the junior high years (with domain referenced aspirations!).
- ... The Career Learning Center Quiz, Appendix item, page 67
A locally developed knowledge of school career resources instrument used for needs assessment.
- ... The ACT Assessment of Career Development (selected items), Appendix item 70
Norm referenced with national 8th and 9th grade norms.
- ... A structured interview.
Designed to assess student participation in career education and the status of career planning. Includes four questions with national norms from the 1973 ACT study.
- ... The NTS Student Activity Checklist, Appendix item, page 73
Norm referenced based on fifteen U.S. Office of Career Education Projects, 1976 - 1977.

Student participation in each learning objective area is summarized along with competencies, on the following student Profile Sheet. An example Student Profile Sheet filled in also follows:

ROSEVILLE AREA SCHOOLS' CAREER DEVELOPMENT CASE STUDY EVALUATION

STUDENT PROFILE SHEET							Activities - ⁴
NAME	Percentile DAT Verbal & Numerical (Local Norms) Grade Average	Knowledge & Attitude ¹ Career Development Test Week 5	Career Learning Centers Quiz Week 10	ACT ² Assessment of Career Development Week 17	Interview Week 18-20	NTS ³ Student ACT Checklist Week 36	Classroom & Career Learning Centers Week 37
I. SELF-APPRAISAL							
1. Abilities							
2. Interests							
3. Values							
II. DECISION-MAKING SKILLS							
1. How to make decisions							
2. Consequences							
3. Goal setting							
4. Work/play family trends							
III. LIFE-STYLE EXPLORATIONS							
1. Advantages and disadvantages							
2. Knowledge of resources							
3. Requirements							
4. School/work motivation							
5. Economic/social change							
6. Job seeking							
		¹ Local Norms	² National Norms 8th Gr.	³ Local Norms	⁴ Local Norms		

ROSEVILLE AREA SCHOOLS' CAREER DEVELOPMENT CASE STUDY EVALUATION

NAME		8 - 12		STUDENT PROFILE SHEET																Activities - 4					
85 Percentile DAT		Knowledge & Attitude ¹				Career Learning				ACT ²				MTS ³				Classroom & Career Learning Centers							
Verbal & Numerical (Local Norms)		Career Development Test				Centers Quiz				Assessment of Career Development				Interview Student ACT Checklist				Centers							
B Grade Average		Week 5				Week 10				Week 17				Week 20				Week 36				Week 37			
I. SELF-APPRAISAL																									
1. Abilities		2	0	1	1	1	1					1	1					2 1/2	1						
2. Interests		1	1	2	0	1	1	1										2 1/2 1/2	1						
3. Values		1	2	1								1						1 1/2	1						
Average 53 %										High															
II. DECISION-MAKING SKILLS																									
1. How to make decisions		1	0	1	1	1	1	1										1 1/2	2						
2. Consequences		1	1	0	1																				
3. Goal setting		1	1	1	2	1	0	1	0			1	1	1	1	1			None						
4. Work/play family trends		1	1									1													
Average 50 %										High										Average					
III. LIFE-STYLE EXPLORATIONS																									
1. Advantages and disadvantages		1	2									1	0	1				1 1/2	1 1						
2. Knowledge of resources		2	1	0	0	1	1	1	1	0	1	1	1	1	1	1		1 1/2 1 1/2	0 0 2 1 0 1 1 0 0 1 1 1 1						
		1	1							1	1	1	1	1				3 1	1 1 1 1 1						
3. Requirements		1	1	1	1	1	1	1				1	1	0	0	1	1	1 2/3 3/4 3/4	1 1 1 1 1						
4. School/work motivation		1	1	1															1 1						
5. Economic/social change		1	1	1	1	1	0	1	0			1	1	1				0	1						
6. Job seeking																		0 1/2 1/2							
High 67 %										Above Average										Above Average					
¹ Local Norms										² National Norms 8th Gr										³ Local Norms					
										Above Ave.										Above Average					

A summary sheet is needed to report the data from the entire case study and should include an assessment of congruity of career exploration and planning based on a comparison of interest areas and career investigation areas. In column four on the completed summary sheet (page 47), "congruent" means interests and careers investigated are related; "not congruent" means not related and "mixed" indicates a mixed relationship. In further explaining the summary sheet, column one indicates the student number (S-15, etc.); above the student number is listed the student's grade average for the two preceding years, followed by the percentile ranking composite scores of the DAT verbal reasoning and numerical reasoning batteries, using local norms. For example, Student 15 has a B grade average and a composite DAT score of 97 (B/97).

The "competency" statement under each of the three skills columns (columns 2, 3 and 4) is based on summaries of all competency measures previously mentioned. The activity statement is a summary of activity participation by the student, both in the classroom and in the career learning center.

Realism of choosing might be added by comparing school achievements and developed aptitudes with careers investigated. Adding values rankings and risk taking could be a long range goal. A blank summary sheet and a filled in sample follow.

The summary sheets can be used to look for relationships between career education activities and growth in competencies over time. Ideally the case study would carry through schools K-12, and beyond, with yearly data collection, interpretation and reporting. A criterion referenced approach can easily be used when one has some rationale for establishing standards of competency.

Some of the conclusions and recommendations from the Roseville case study example were:

- ... Laps and overlaps in instructional experiences as related to objectives are easily seen.
- ... Case study data collection is very time consuming in its formative stages.
- ... An alternative delivery system for monitoring student progress and planning individual learning activities is needed; i.e., a teacher-advisor system.
- ... A follow up study of at least five years is needed.
- ... The case study repeated measures approach requires better instruments in its inception, as on-going instrument revision is difficult in the repeated measures approach.
- ... Sharing the results with students, teacher, and other decision makers is necessary to justify the time required.

SUMMARY SHEET - CASE STUDY EVALUATION

STUDENT NUMBER	SELF APPRAISAL SKILLS	DECISION MAKING SKILLS	EXPLORATION SKILLS	INTERESTS CAREER PLANS	ACTIVITY RECORD
					46
					52
51					

SUMMARY SHEET - CASE STUDY EVALUATION

STUDENT NUMBER	SELF APPRAISAL SKILLS	DECISION MAKING SKILLS	EXPLORATION SKILLS	INTERESTS CAREER PLANS	COMMENTS
B/97 S-15	Competency av to slightly below Activities av.	Av to av + Av	Av + Av +	Congruent	Increased interest shown during and after social studies career unit
B-/70 S-16	Competency Below av Activities av	Above av Av	Av to slightly below Av	Congruent	Increased activity in CLC after interview (for class projects and on own)
B/95 S-17	Competency av. Activities av.	Av to av - low	Av Av	Mixed	Growth noted in compe- tence areas scores went from below average to high during year
B/80 S-17	Competency Av to Av - Activities Av +	Av + Av -	Av Av +	Mixed	A real career education supporter and recruiter for two years. Growth shown in competency areas over the year
A-/95 S-19	Competency Av to av - Activities Av	Av - Av + Av	Av + Av +	Congruent	Made use of CLC for shadowing experience after interview.
B/40 S-20	Competency Av Activities High	Av Av	Av - Av +	Congruent	Completed all self appraisal exercises and did many exploration ac- tivities. Growth noted.
A-/70 S-21	Competency Av to Av - Activities Av	Above av Av -	Av + Av +	Mixed	Participated in CLC activities and exercises after social studies unit

LONGITUDINAL DESIGN

A longitudinal design can be combined with any other design or instrument approach, including pre-post, post only, case study repeated measures, and content referenced, criteria referenced, norm referenced or domain referenced assessments. It's highly unlikely that many of the outcomes of a comprehensive career education program will show up in one, two, three or more years. However, long range studies can have several inherent disadvantages, including:

- ... Motivation suffers on the part of part of program planners, evaluators, and target populations if short-range feedback is not available.
- ... Missing data becomes an increasing problem over time.
- ... Programs can not be modified and improved without evaluation feedback.
- ... Goals, objectives, programs and instruments change over time and make interpretations difficult.

In order to ameliorate the preceding limitations, the following recommendations are made:

- ... Design short-term evaluation of specific programs, such as staff development workshops and curriculum units. This can be incorporated into long range evaluation plans.
- ... Use sampling techniques and case study repeated measures designs to control costs.
- ... Concentrate long-range evaluations on only a few core objectives, programs, and quality instruments.
- ... Make each school year a meaningful, independent segment in terms of evaluation. (Also true for needs assessment, planning and implementation.)

The traditional follow-up study has the surface appearance of a longitudinal design with little of the substance. Follow-up studies usually lack predetermined goals, outcome objectives, measures of competency and specified treatments.

Using the reactions of people who left school five, ten, or fifteen years ago to evaluate career education programs is tenuous at best. Follow-up studies have a place in needs assessment studies and can be incorporated into planned longitudinal evaluation designs.

EXAMPLE EVALUATION PLAN

The following plan was used to evaluate the Roseville U.S.O.E. Career Education Dissemination Grant, 1976-1977.

EVALUATION PLAN

Evaluation Question (Objective)	Measurement			Data Collection Procedures			Data Analysis Techniques
	Instrument/ Technique	Success Criterion	Special Considerations	Target Group	Collection Dates	Person Responsible	
STAFF OBJECTIVES							
(A) Did the staff develop positive attitudes toward career education?	Locally developed questionnaires. Interviews when appropriate. Record of involvement in career education activities.	Improved attitudes for at least 75% of participants who are not at the ceiling on pretest.	Outcome objective.	Workshop participants and individuals involved in curriculum development.	Beginning and end of participation; also at end of year for some. Avail. April 15, 1977.	Project director and external evaluator.	Descriptive item analysis.
(1-4). How many and what kinds of workshops were conducted or sponsored by the project?	Record of workshops in project office.	Stated number in objective.	Process objective.		Continuous Avail. May 15, 1977.	Project director	Listing of workshops
(5). How people participated in school-community visitations, exchanges, internships?	Record of participation kept in project office.	Stated number in objective	Process objective.		Continuous Avail. May 15, 1977.	Project director	Listing of involvement
(6). How many teachers, students, parents, and community members were involved in curriculum development activities?	Record of involvement kept in project office.	At least 30 teachers.	Process objective		Continuous Avail. Jan. 30, 1977 May 15, 1977	Project director	Listing of involvement
(7). What kinds of assistance did the five Career Learning Centers provide for teachers?	Record kept by aides in Career Learning Centers.		Process objective		Continuous Avail. May 15, 1977.	Career Learning Center aides	Description of assistance
(B) Did school and community groups develop a better understanding of the expectations each group (school and community) has of the other?	Questionnaires to measure understanding of expectations.	Improved understanding for at least 75% of participants who are not at ceiling on pretest.	Outcome objective	Participants in staff development options that include school-community relations as an objective.	Beginning and end of participation. Avail. April 15, 1977.	Project director and external evaluator.	Descriptive item analysis.

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Evaluation Question (Objective)	Measurement			Data Collection Procedures			Data Analysis Techniques
	Instrument/Technique	Success Criterion	Special Considerations	Target Group	Collection Dates	Person Responsible	
(2). Were committees and task forces activated in stated areas in objective?	Record of activation kept in project office.	Stated number and areas in objective.	Process objective		Continuous Avail. Dec. 30, 1976.	Project director	Description of activation.
(4). Was a workshop on planned decision-making conducted?	List of participants and course content.	Positive reaction to workshop by participants.	Process objective		At time of workshop. Avail. April 15, 1977.	Project director	Description of participation.
(5). Was a directory of school-community resources provided?	Copy of directory in project office and each of the five career learning centers.	1 copy of directory in project office and each career learning center.	Process objective		By Dec. 1, 1976	Project director	Descriptive
(C-D) Did staff develop a greater awareness and knowledge of career education definitions and issues?	Locally developed instrument.	Increased knowledge by at least 90% of participants.	Outcome objective	Participants in the 2-credit introductory workshop.	Beginning and end of workshop. Avail. April 15, 1977.	Project director and external evaluator	Descriptive item analysis.
(E) Did staff develop teaching and advising skills in the five student outcome areas: self-concept, decision making, career and life-style exploration, interpersonal competence, school and work meanings and values?	(1) Locally developed instrument to measure knowledge of teaching and advising skills. (2) Judgments of the quality of activities developed by staff involved in student centered career maturity measurement (SCCM) (3) Judgments of appropriateness of curriculum units developed.	(1) Increased knowledge by at least 90% of the workshop participants. (2) Criteria to be developed. (3) Criteria established in proposal.	Outcome objective	(1) Participants in the workshops. (2) Staff involved in SCCM. (3) Staff involved in unit development.	(1) Beginning and end of workshop. (2) Mid-year and end-of-year. (3) Continuous Avail. June 30, 1977.	Project director and external evaluator	(1) Descriptive item analysis. (2) Description (3) Descriptive
(1). How many workshops were conducted in the teaching and advising skills area? How many staff partici-	Record kept in project office.	Met number stated in objective.	Process objective		Continuous Avail. May 15, 1977.	Project director	Listing of workshops.

Evaluation Question (Objective)	Measurement			Data Collection Procedures			Data Analysis Techniques
	Instrument/ Technique	Success Criterion	Special Considerations	Target Group	Collection Dates	Person Responsible	
(3). What kinds of student-centered career maturity measurement and learning activities were provided? How many staff and students were involved?	Records of activities and participants kept in project office.	Met numbers stated in objective.	Process objective		Continuous Avail. May 15, 1977	Project director	Description of activities.
(7) Did staff develop competencies in group work skills?	(1) Knowledge test on group and decision-making skills. (2) Questionnaires regarding value of committees and task forces.	Increased knowledge by at least 90% of participants.	Outcome objective	(1) Participants in workshop. (2) Committee members.	(1) Beginning and end of workshop. (2) End of year. Avail. May 15, 1977.	Project director and external evaluator	Descriptive item analysis.
STUDENT OBJECTIVES							
(A) Did students who participated in curriculum units show increased knowledge and attitudes in the following objective areas: .self-awareness .decision-making .educational-vocational awareness .interpersonal skills .respect for work	Locally developed instruments designed to measure specific objectives within each area and curriculum unit.	Increased knowledge and improved attitudes by at least 75% of students not at the ceiling on the pretest.	This evaluation question covers student outcome objectives A-E in proposal. Students will be measured only on the objectives (areas) to which they have been exposed; e.g., students who only take part in self-awareness units will be measured on appropriate self-awareness items.	Classrooms of students who participate in the curriculum units, Comparison classes who did not use the units.	Beginning and end of each curriculum unit. Avail. 1/2 on Jan. 30, 1977. 1/2 on June 30, 1977.	Classroom teachers, project director.	Descriptive item analysis, and comparison of mean score differences.
(1). How many curriculum units were field tested in each of the following objective areas: .self-awareness .decision-making .educational-vocational awareness .interpersonal skills .respect for work	Records kept in project office.	Standards set in the project proposal for participation by department, grade level, and content.	Process objective		Continuous Avail. May 15, 1977.	Project director	Listing of curriculum units.

Evaluation Question (Objective)	Measurement			Data Collection Procedures			Data Analysis Techniques
	Instrument/ Technique	Success Criterion	Special Considerations	Target Group	Collection Dates	Person Responsible	
(B) Did students who participated in extensive student-centered career maturity learning experiences show increased knowledge and attitudes in the following objective areas: .self-awareness .decision-making .educational-vocational awareness .interpersonal skills .respect for work	(1) Locally developed or combination of local and commercial instrument to measure the five objective areas. There will be separate junior high and senior high batteries.	(1) Increased knowledge and improved attitudes by at least 75% of students not at ceiling on the pretest.	This evaluation question covers student objectives A-E in the proposal for students who have more involvement than classroom curriculum. It is anticipated that the battery of items covering all five objectives will be appropriate for them. It also is anticipated that the battery of items will be the forerunner of an instrument that will be used for district-wide assessment of career maturity in the future.	Students who participate in the student-centered career maturity measurement activities, and students that have extensive involvement in career education activities with counselor, career learning center specialists.	(1) Beginning and end of year. (2) Selected students from those with extensive involvement. Avail. May 15, 1977.	External evaluator and project director.	(1) Descriptive item analysis. (2) Single case methodology.
(1) How many students were involved in extensive career education activities other than classroom curriculum? What were the activities?	Record of participation and description of activities kept in project office.	Standards set in project proposal	Process objective.		Continuous Avail. May 15, 1977.	Project Director, and external evaluator.	Descriptive

The following checklist was presented to the Career Education Dissemination Projects in 1975 by the Office of Career Education:

HOW DOES YOUR EVALUATION MEASURE UP?
-a checklist for evaluation excellence-

The following criteria, developed by evaluation specialists, offer one way in which you might determine the adequacy of your project's evaluation plans and activities. The criteria are divided into three sections representing different levels of quality. How many of these criteria does your project evaluation meet?

Criteria for an ADEQUATE evaluation:

Does your evaluation:	<u>Yes</u>	<u>No</u>
1. Have a clear statement of objectives in measurable terms that make education sense?	_____	_____
2. Prioritize the objectives in terms of their importance to the project and in terms of the directness of their relationship to what the project will do to achieve them?	_____	_____
3. Measure at least the top three objectives with appropriate measurement devices?	_____	_____
4. Have a design which permits the detection of actual change or project impact?	_____	_____
5. Have a provision for a third party audit?	_____	_____
6. Assess changes in participants/learners who are representative of those who would be served if the project were widely implemented in other locations?	_____	_____
7. Collect data from enough persons to give a reliable picture of project effectiveness?	_____	_____
8. Document what is being done to achieve the objectives, the problems encountered, how these problems are solved; is there enough detail in this documentation to allow others to replicate your project's efforts?	_____	_____
9. Have a provision for computing per participant or per learner costs?	_____	_____
10. Have a provision for a review of the final report by an outside evaluation person to assess the extent to which the report's conclusions are justified?	_____	_____

CHECKLIST CONTINUES ON THE FOLLOWING PAGE -

Criteria for a GOOD Evaluation:

Does your evaluation (in addition to meeting all of the criteria for an ADEQUATE evaluation):

	<u>Yes</u>	<u>No</u>
11. Have a design which permits causal inferences to be drawn at the quasi-experimental level?	_____	_____
12. Have a provision for a third party evaluation? (criterion #5 may be eliminated if this criterion is met.)	_____	_____
13. Report on <u>all</u> of the major objectives in addition to the top three?	_____	_____
14. Collect data from a large enough group of persons to show for what type of participant/learner the project worked best or if it worked equally well for all persons or subgroups?	_____	_____
15. Search for unanticipated consequences of the project and assess these as well as negative consequences?	_____	_____

Criteria for an EXCELLENT Evaluation:

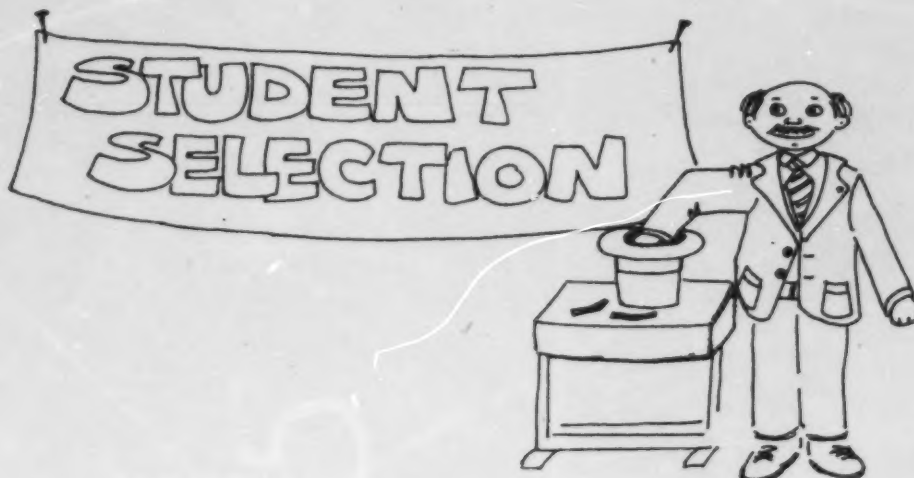
Does your evaluation (in addition to meeting all of the criteria for a GOOD evaluation):

16. Have a design which permits an analysis of why different approaches did or didn't work?	_____	_____
17. Have a provision for an external audit of the third party evaluator?	_____	_____
18. Have a design which permits a strong inference of causality, including appropriate statistical tests?	_____	_____

DATA COLLECTION

Sampling procedures are dictated by evaluation design and costs.

Student Sampling Procedures



Determining which students to assess is a decision that must be made before the questionnaire or other techniques are selected. It is often not practical to test every student in a school population. Therefore, it is important to use a sample that is representative of the larger school population. Common methods of selecting student samples include:

Method I: All Students

Every student participates in the study. Certainly, this is a representative sample of the current student population, but sometimes is an impractical method in terms of time and expense.

Method II: Best Guess

Specific classroom or subgroups of students (based on judgment) represent the larger student population in a specific school or age range.

Method III: Mathematical Selection

Students are selected using a random number table or a random counting procedure. Chance is relied on to cancel out known or unknown influences that make samples not representative.

It may not be possible to test all students K-12, but if the population is defined as specific subgroups such as all ninth graders, it may be feasible to test a large percentage. If a subgroup is used, judgment must be made about how much confidence to place in generalizations made to younger and older students. It may be desirable to include students in several grades; e.g., third, eighth, eleventh.

If more than one grade level is sampled, it is important to coordinate the assessment goals. The questions to consider in selecting the number and size of grade levels are:

- ... In the past several years, have program changes taken place which may have changed student performance over the grade levels?
(Yes, means you may want to consider more than one grade level sample.)
- ... Are specific grade level program interests, in or concerns for, change apparent? (Yes, means you may want to consider starting the needs study in those grades.)

It is also necessary to consider population or subpopulation characteristics that may affect the assessment results. Examples of population characteristics that might affect career development status are age, sex, educational experiences, motivation, and reading skills. For example, if one wanted a representative sample of ninth graders, an all-girl or all-boy sample would not be representative, nor would an all "A" or an all "F" student sample. When the best guess method is used, a prior judgment or "educated guess" about the characteristics of the population being sampled must be made. Quotas of so many boys and so many girls may be established. School districts with more than one school building may wish to establish a set sample size to be chosen from each building.

Random selection procedures can be employed to draw a sample of predetermined size from the larger population. Drawing names from a hat or student numbers from a table of random numbers are two examples. Advocates of this method believe that a sample of 10 to 20 percent of the population is representative provided the selections were truly random.

Frequently it is desirable to use a combination of sampling methods. For example, quotas of students to be drawn from each subpopulation can be established--such as a 15 percent sample of ninth grade boys and girls from two school buildings.

Many small schools may wish to select a specific grade level or levels and assess all students at that level. Practical sample considerations include:

- ... the ease of testing entire classes and grade levels versus random selection procedures,
- ... the time involved in determining quotas to get representative samples,
- ... the time and expense of testing, tabulating, and analyzing data from large populations.

Instrument Administration

If the assessment instruments have been pilot tested and refined for clarity, administration is a relatively easy task. Testing in regular classroom settings is ideal. All test administrators and monitors should be familiar with the purpose and nature of the assessment instrument. Separate answer sheets with grade level, date should be used. It is convenient to group items by goal areas for scoring purposes.

UNINTENDED EFFECTS

Side effects or secondary effects of a program need to be looked at very carefully. Besides objectivity, an outside or third party evaluator may have the advantage of seeing important positive and/or negative effects of educational programs. Some unintended outcomes or effects can be very important in either the positive or negative direction. The danger of focusing too narrowly in evaluation is lessened by using outside evaluators and broad based advisory committees.

EVALUATOR RESOURCES AND THE USE OF EXTERNAL CONSULTANTS

The Roseville Area Schools' experience in evaluation has been to develop the skills of the staff so that the bulk of the process objectives and outcome objectives can be internally developed and measured with a combination of standardized, modified and locally developed instrumentation.

Educational evaluation however has many speciality aspects and each major Roseville program has used external consultation in collaboratively refining the evaluation design and instrumentation, collecting some of the data from staff, looking for unintended effects and interpreting and reporting results.

Expertise is always welcome, and even if the local school staff has sufficient expertise (most do if they cultivate it), the objectivity and credibility of external evaluation influences decision makers.

The Roseville Area Schools' U.S.O.E. Communication Project, 1977-78, is using this guideline for staff and external evaluation effort:

A. Evaluation Planning Staff	70%	External Evaluator	30%
B. Evaluation Design - Staff	20%	External Evaluator	80%
C. Evaluation Implementation	50%	External Evaluator	50%
D. Evaluation Application	70%	External Evaluator	30%

Without the benefit of demonstration grant funds, the staff's share of evaluation efforts would need to increase in all categories, especially in design and implementation. More use of personnel from different programs and departments in a school can help gain objectivity as well as more sharing of school and community evaluation help, including higher education personnel.

In contracting with an external evaluator it has been helpful to elicit proposals on a competitive basis.

The evaluation consultant bidders will need information on program context, goals and objectives, and internal evaluator resources before a realistic proposal can be expected.

A contract for external evaluation services should include:

- ... Specific charges (budget)
- ... Preliminary design plans (a final design comes later)
- ... Written report responsibilities
- ... Other reporting responsibilities
- ... Reporting formats
- ... Delivery schedule
- ... Responsibilities of the school district

COST EFFECTIVENESS

Determining the costs of specific components of a career education program may be nearly as difficult as determining the effectiveness of such components. Since career education is more of a reform, refocusing movement than a specific program, it is very difficult to separate costs of career education from the general costs of education. Another challenging aspect of career education is the assumption that each program component will have a mutual multiplying effect on all other components. Measuring the interaction effects of program components complicates a cost effectiveness analysis.

Strategies that might help a cost effectiveness approach are:

1. Develop detailed budgets and cost accounting procedures around program goals and learner goals as well as around traditional budgeting categories.
2. Concentrate on measuring the major goals of a program without forgetting to look for unintended effects.
3. Include staff time and community support in kind as very important costs items (the most limited resources we have).

REPORTING RESULTS

The most thorough evaluation imaginable will be of little value unless the results influence decision makers. Reporting of evaluation results needs to consider the following factors:

1. Different formats and terminology for various audiences, that is, students, teachers, administrators, school boards. Both the jargon used and the mode of presentation used, that is, print, graphics, visuals, etc., need to be considered.
2. Self evaluation is important, but additional objectivity is needed to influence decision makers.
3. The standards for judging needs to be made very explicit.
4. Descriptive analysis, case studies, item analysis of content referenced instruments, etc., all have a place in evaluation.

RESOURCES

In addition to the resources or needs assessment mentioned previously the following materials are recommended:

Arterborg, Elvis; Collie, John; Jones, Dave; Morrell, Jayne, The Efficiency of Career Education, National Advisory Council for Career Education, 1976. A review of evaluation studies in the areas of: career awareness, academic achievement and career decision-making.

Bhaerman, Robert D., Career Education and Basic Academic Achievement - A Descriptive Analysis of the Research, Office of Career Education, U.S. Office of Education, May, 1977.

An analysis of 38 studies relating academic outcomes to career education.

Bonnet, Deborah, Checklist for Reporting Results of Student Outcomes Studies in Career Education, New Education Directions, Inc., Crawfordsville, Indiana, May, 1977. A guide for ensuring that evaluation reports contain the necessary information for interpreting evaluation results.

Cambell, Donald T; Stanley, Julian C., Experimental and Quasi-Experimental Designs for Research, Rand McNally College Publishing Company, Chicago, 1963. A usable reference on design applicable to educational evaluation.

Fox, Robert; Luszki, Margaret Barron; Schmuck, Richard, Diagnosing Classroom Learning Environments, Presents a variety of alternative assessment techniques with elementary student examples.

Hoyt, Kenneth B, Perspectives on the Problem of Evaluation in Career Education, Reports the conclusions of two mini conferences on evaluation of career education.

Tennyson, W. Wesley; Hansen, L. Sunny; Klaurens, Mary K.; Antholz, Mary B., Educating for Career Development, Pupil Personnel Services, Minnesota Department of Education, St. Paul, Minnesota, Presents a comprehensive student learner objectives framework.

Young, Malcolm B., Schuh, Russell G., Evaluation and Educational Decision-Making: A Functional Guide to Evaluating Career Education. Development Associates, Inc., Washington D.C., 1975, U.S.O.E., Reviews planning, data collection, design and instrumentation.

Worthern, Blaine R; Sanders, James R., Educational Evaluation: Theory and Practice, Charles A. Jones Publishing Company, Worthington, Ohio., A comprehensive text book on educational evaluation written for the general educator.

APPENDIX

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APPENDIX I - EVALUATION SKILLS TEST

Roseville Area Schools

Name _____

School _____

Teacher _____

Hour _____ Date _____

The following short answer test is designed to measure the major objectives of the Evaluation Booklet.

1. Briefly describe the major components of an evaluation program.
2. Give three examples of a learner objective in career education. Consider measurement practicality as well as importance to the career development process.
3. Describe the basic steps in conducting a needs assessment.
4. Develop criteria for evaluating assessment instruments.
5. Explain how you would set up a pre-post with a control group evaluation design.
6. Define in two or three sentences:
 - a. criterion referenced instruments
 - b. unintended effects
 - c. longitudinal designs
 - d. case study repeated measures design
 - e. applied performance techniques

APPENDIX II - CAREER DEVELOPMENT TEST

Roseville Area Schools

Name _____

School _____

Teacher _____

Hour _____ Date _____

Indicate the extent to which you agree or disagree with each of the statements by circling one of the following choices:

SA if you strongly agree with the statement

A if you agree with the statement, but not strongly

D if you disagree with the statement, but not strongly

SD if you strongly disagree with the statement

DO NOT circle between the choices or more than one choice

A. Self Appraisal

- | | | | | |
|--|----|---|---|----|
| 1. In order to choose a job, you need to know what kind of person you are. | SA | A | D | SD |
| 2. Interests and abilities are the same things. | SA | A | D | SD |
| 3. It's probably just as easy to be successful in one job as it is in another. | SA | A | D | SD |
| 4. A person can do any kind of job as long as they try hard. | SA | A | D | SD |
| 5. What we like to do is always the same as what we are good at. | SA | A | D | SD |
| 6. Different people have different reasons for selecting a job. | SA | A | D | SD |
| 7. Work is always something you don't like to do. | SA | A | D | SD |
| 8. A person's interests change as he/she experiences new things. | SA | A | D | SD |
| 9. I think I have a good idea of what things are important to me. | SA | A | D | SD |

B. Decision Making

- | | | | | |
|---|----|---|---|----|
| 10. In the early high school years it is wise to keep ideas about your future job flexible. | SA | A | D | SD |
| 11. Studying about possible job opportunities can wait until senior high. | SA | A | D | SD |
| 12. Each student should plan for one job to last a lifetime. | SA | A | D | SD |
| 13. Career development planning is relatively worthless because occupations are changing so rapidly. | SA | A | D | SD |
| 14. Upon graduation from high school, a final career choice should be made. | SA | A | D | SD |
| 15. The goal of occupational planning is to find the one occupation that will fit all your future needs. | SA | A | D | SD |
| 16. Planning and career decision-making are things you do all through your life. | SA | A | D | SD |
| 17. An occupation that offers a good job today will most likely do so in 20 years. | SA | A | D | SD |
| 18. People should decide on their career early and then stick to it. | SA | A | D | SD |
| 19. I have a good idea about the kind of job I want when I finish school. | SA | A | D | SD |
| 20. The kind of job you have has little effect on who your friends are and how much time you spend with them. | SA | A | D | SD |
| 21. The kind of job you have has little effect on your family life. | SA | A | D | SD |

Craig is a ninth grader interested in becoming a junior high science teacher. Some of the things he should consider before making plans to enroll in a teaching program in college are:

- | | Applies | Might Apply | Doesn't Apply |
|---|---------|-------------|---------------|
| 22. Population growth predictions | _____ | _____ | _____ |
| 23. Does he want to work inside most of the time? | _____ | _____ | _____ |
| 24. Do his parents encourage him? | _____ | _____ | _____ |
| 25. Does he like to work with people? | _____ | _____ | _____ |

	Applies	Might Apply	Doesn't Apply
26. School grade in science	_____	_____	_____
27. School grades in mathematics	_____	_____	_____

C. Career Lifestyle Exploration

- | | | | | |
|---|----|---|---|----|
| 28. Even if you get your "dream job" there may be parts of it that you don't like. | SA | A | D | SD |
| 29. People doing the kind of work you would like to do make good sources of information about the advantages and disadvantages of that job. | SA | A | D | SD |
| 30. The subjects or classes that you choose in school have a lot to do with the kind of job you will have when you are older. | SA | A | D | SD |
| 31. School activities and hobbies can be important in selecting a job in the future. | SA | A | D | SD |

Multiple Choice: Check the appropriate blank.

32. Each person, because of abilities and interests, is best suited for:

- | | |
|--------------------|------------------------------|
| _____ a. One job | _____ c. A group of jobs |
| _____ b. Most jobs | _____ d. Any job of interest |

33. The best single source of information for job research is the:

- | | |
|--|--|
| _____ a. Occupational Outlook Handbook | _____ c. Dictionary of Occupational Titles |
| _____ b. Newspaper want ads | |

34. Based on current trends, in the next decade the demand for laborers is likely to:

- | | |
|-------------------|---------------------------|
| _____ a. Increase | _____ c. Remain the same |
| _____ b. Decrease | _____ d. Be unpredictable |

35. Based on current trends, educational and training requirements for jobs are likely to:

- | | |
|-------------------|---------------------------|
| _____ a. Increase | _____ c. Remain the same |
| _____ b. Decrease | _____ d. Be unpredictable |

36. Based on current trends, job opportunities for women are likely to:
- _____ a. Increase _____ c. Remain the same
- _____ b. Decrease _____ d. Be unpredictable
37. Authorities believe that in the future it is likely that the average number of hours in a work week will:
- _____ a. Increase _____ c. Remain the same
- _____ b. Decrease _____ d. Be unpredictable
38. The "computer age" has brought about fewer job opportunities in:
- _____ a. Most occupations _____ c. Professional occupations
- _____ b. Unskilled occupations _____ d. Public service occupations
39. The number of different occupations in the United States now is:
- _____ a. About 1,000 _____ c. About 10,000
- _____ b. About 5,000 _____ d. Above 20,000
40. In planning your occupational future, you should study:
- _____ a. A few occupations _____ c. A group of occupations
- _____ b. What your parents suggest _____ d. One occupation
41. According to labor market predictions of national averages, you can expect to change your job:
- _____ a. Twice _____ c. Twenty or more times
- _____ b. Several times _____ d. Never
42. John is a ninth grader who wants to operate a large vehicle for a construction firm when he finishes school. Where would he get the best training for that occupation?
- _____ a. A four year college _____ c. A correspondence course
- _____ b. A vocational-technical center _____ d. No training needed

Susan, a ninth grader, would like to learn more about job opportunities and requirements in the field of police work. Rate the following sources that Susan could use:

	Usually Helpful	Sometimes Helpful	Little Help
43. Fictional stories about police	_____	_____	_____
44. English teacher	_____	_____	_____
45. Parents	_____	_____	_____
46. Counselor	_____	_____	_____
47. Newspaper want ads	_____	_____	_____
48. Lists of college subjects and classes available	_____	_____	_____
49. People in police work in her community	_____	_____	_____
50. The school's occupational files	_____	_____	_____

APPENDIX III - CLC QUIZ

Roseville Area Schools

Name _____

Date _____

Teacher _____ Period _____

1. If you have some free time during a study hall, you could to to the CLC which **stands** for:
 - a. Career Life Club
 - b. College Learning Center
 - c. Career Learning Center
2. The occupational file in the CLC has information on:
 - a. Over 50,000 jobs
 - b. Financial aid such as loans and scholarships
 - c. Neither of the above
3. An occupational brief gives a description of:
 - a. How to get a job quickly
 - b. Work performed, qualifications, requirements, outlook and earnings
 - c. Your previous job experience
4. Most of the materials in the CLC:
 - a. Can be checked out
 - b. Are for use by teachers only
 - c. Cannot help you make decisions about your future
5. The number "916" identifies:
 - a. The Roseville School District
 - b. The Vocational-Technical School for the North St. Paul area
 - c. The prefix for all Social Security numbers
6. The Popeye comic books in the CLC:
 - a. Cannot help you learn about career opportunities
 - b. Cannot be checked out
 - c. Are organized by the cluster system

7. Inside Fairview is the name of:
 - a. The new school paper
 - b. A list of interests and jobs of the staff here at Fairview
 - c. A movie made by a drama class
8. The initials D.O.T. stand for:
 - a. Double over time
 - b. Dictionary of Occupational Titles
 - c. Daily outlook temperature
9. A monthly magazine with up-to-date information on occupations which is found in the CLC is the:
 - a. Career World
 - b. Occupations Unlimited
 - c. Job News
10. The Occupational View-Deck can give you some ideas about occupations for which you might be suited by putting together:
 - a. Your interests and temperaments
 - b. Your educational goals, physical requirements and desired working conditions
 - c. Both of the above
11. In Minnesota a person may attend a vocational-technical school tuition free:
 - a. Up to the age of 16
 - b. Up to the age of 21
 - c. At any age
12. In the CLC you:
 - a. Could get information about part-time and summer jobs
 - b. Could not get information about the Social Security system
 - c. Could not get information about training institutions

13. The CLC:

- a. Does not have color-sound filmstrips of people on the job
- b. Has games such as "Careers" and "Life" which can be checked out to the Relax Room
- c. Cannot give you help in choosing high school subjects

14. Come to the CLC if you would like to:

- a. Find out more about yourself and talk about the opportunities open to you
- b. Learn how to fill out applications, what to do and say during an interview
- c. All of the above

15. How many times have you used the CLC?

- a. Several times
- b. At least once a week
- c. Not at all

16. Did you use the CLC as part of:

- a. A class assignment
- b. On your own
- c. Both

APPENDIX IV - ACT ASSESSMENT OF CAREER DEVELOPMENT

Roseville Area Schools

Name _____

Date _____

Teacher _____ Period _____

I. TRUE - FALSE - In the blank in front of the number indicate if the sentence is TRUE or FALSE. Use T for True; F for False.

- _____ 1. Most people do not need to begin career planning until their final year in high school.
- _____ 2. The earlier one chooses one's life work the better.
- _____ 3. Most persons remain in the same job throughout their adult lives.
- _____ 4. Few women work outside of the home after marriage.
- _____ 5. Less than one-third of all job openings require a college degree.
- _____ 6. Most people have the ability to do well in any job if they set their minds to it.
- _____ 7. There is only one "right job" for a person in terms of his/her abilities.
- _____ 8. The unemployment rate of 20-year-olds in the labor market is usually less than the rate for other adults.
- _____ 9. The State Employment Service Office provides free information about job openings and job training programs.
- _____ 10. Apprentices are paid while they learn.
- _____ 11. The English and math skills of freshmen are about the same from one college to another.

II. MULTIPLE CHOICE. Put the letter of the correct answer in the blank in front of the number.

- _____ 12. Which one of the following is the best way to begin career planning:
 - a. Look at what is available on the job market
 - b. Take tests to find out what you should do.
 - c. Consider what it is you want out of a job.
 - d. Read as many job descriptions as you can find.

- _____ 13. Choosing a job is similar to choosing a marriage partner in that:
- a. there is little you can do to prepare for either choice.
 - b. how a person feels about the choice is important in both cases.
 - c. there is only one right person and one right job for each of us.
 - d. both choices are final.
- _____ 14. Ideally, which of the following should be most important in your career decisions?
- a. What the job market is like.
 - b. The decisions you made before.
 - c. What your parents did.
 - d. What you want out of life.
- _____ 15. Which of the following is probably the best way for a person to find out whether he would like the work of a carpenter?
- a. Ask a counselor.
 - b. Talk to a building contractor.
 - c. Take a shop course in woodworking or carpentry.
 - d. Read articles about the building industry.
- _____ 16. What will the labor force probably be like 10 years from now?
- a. Most jobs will require 4 or more years of college.
 - b. There will be fewer jobs for unskilled workers.
 - c. There will be more jobs for high school dropouts than there are now.
 - d. There will be fewer jobs for technical workers.
- _____ 17. The Occupational Outlook Handbook gives information about all of the following except:
- a. Job entry requirements
 - b. Average salaries in occupational fields
 - c. Job openings in major cities
 - d. Descriptions of job duties
- _____ 18. Will I be able to find the job I have prepared for? (Find the choice below that is most important to consider in answering this question.)
- a. Goals and values
 - b. Abilities
 - c. Interests
 - d. The job market
- _____ 19. In which of the following jobs would a person who values job security (not being put out of work) be most satisfied?
- a. postal clerk
 - b. carpenter
 - c. disk jockey
 - d. politician

- _____ 20. In which of the following jobs would a person who values independence (deciding for yourself how to do your job) be most satisfied?
- a. computer operator
 - b. bookkeeper
 - c. farmer
 - d. telephone operator
- _____ 21. A tool and die maker's job is most like that of:
- a. a welder
 - b. a machinist
 - c. an electrician
 - d. a boilermaker
- _____ 22. Biology and chemistry courses would probably be most helpful to a student thinking about becoming a:
- a. meatcutter
 - b. tailor
 - c. jeweler
 - d. dietitian
- _____ 23. Buildings are usually planned and designed by:
- a. a pattern maker
 - b. an architect
 - c. a building contractor
 - d. an engineer
- _____ 24. Six years of college and professional training are usually needed to get a job as:
- a. an elevator repairman
 - b. a cashier
 - c. a draftsman
 - d. an optometrist
- _____ 25. Choose the minimum type of training the following job usually requires:
Waitress -
- a. on-the-job training
 - b. four years of high school plus on-the-job training
 - c. apprenticeship
 - d. vocational school training
- _____ 26. Choose the minimum type of training the following job usually requires:
Computer Programmer -
- a. on-the-job training
 - b. two years of community or technical college
 - c. four years of college
 - d. apprenticeship

APPENDIX V - NTS STUDENT ACTIVITY CHECKLIST

Roseville Area Schools

Name _____

Date _____

Teacher _____ Period _____

Please indicate how often you have taken part, in your school, in each of the activities listed below. Mark the letter that is closest to what you think is the correct answer. If you have taken part, mark:

- (a) "at least once a week" (c) "about once a month"
 (b) "two or three times a month" (d) "less than once a month"

If you have never taken part in the activity, or if the activity does not apply to you, please mark:

- (e) "never" or "does not apply"

- _____ 1. Use TV, tapes, filmstrips or radio to learn about occupations.
- _____ 2. Attend a career fair.
- _____ 3. Talk about jobs and careers with groups of students.
- _____ 4. Learn about how to look for and get a job.
- _____ 5. Go around with workers to learn what they do on their jobs.
- _____ 6. Learn how attitudes and values relate to various careers.
- _____ 7. Study the interests people need to have for particular careers.
- _____ 8. Report to the class what was learned about careers on field trips.
- _____ 9. Use the library or learning center to learn about careers.
- _____ 10. Take part in class activities where we pretend we are in different jobs.
- _____ 11. Learn how to do the things people do in their jobs.
- _____ 12. Go on field trips to business or industries to learn what people do in their jobs.
- _____ 13. Learn about how reading and arithmetic will be important in future careers.
- _____ 14. Get personal advice from people in the school about my future job possibilities.
- _____ 15. Learn about the things needed for being a good consumer.

- _____ 16. Use magazines and newspapers in school to learn what people do in their careers.
- _____ 17. Listen to workers talk to the class about the work they do.
- _____ 18. Learn how the material in each class is related to the world of work.
- _____ 19. Receive personal advice from people at school about future education possibilities.
- _____ 20. Listen to parents talk to the class about what they do in their work.
- _____ 21. Report to the class about what was learned after following workers around to learn what they do on their jobs.
- _____ 22. Make tests to find out how much I know about the skills and interests needed for different jobs.
- _____ 23. Take home material from class so that my parents can help me learn about jobs.
- _____ 24. Take tests to find out about my job interests and skills.
- _____ 25. Have separate classes that teach me about jobs.

(Please mark how often you take part in the following activities when you are not in school.)

- _____ 26. Talk to my parents or listen to them talk about what they do.
- _____ 27. Help people in my family do their jobs.
- _____ 28. Attend meetings of groups that are learning about jobs and careers such as the Future Farmers of America, Future Teachers of America, 4H, Future Homemakers of America, and Junior Achievement.